Emotional Competence Inventory (ECI)
Technical Manual

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Hay Group, McClelland Center for Research and Innovation
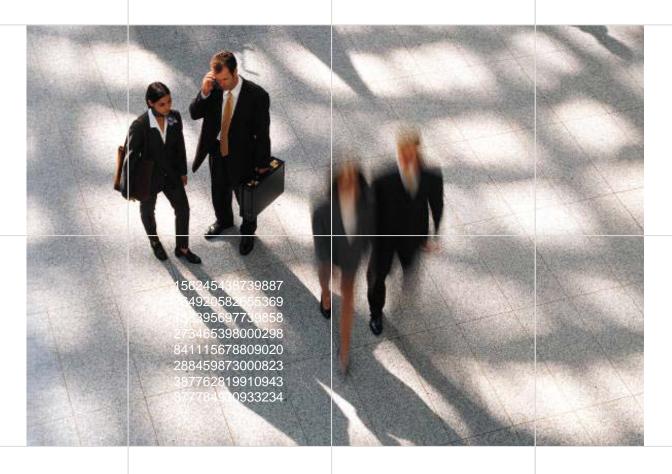Prepared by Steven B. Wolff, DBA

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HayGroup®

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McClelland Center for Research and Innovation

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Table of Contents

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Summary

This technical manual provides background information on the ECI 2.0, reliability and validity information, and norms.

Reliability Overview

Internal consistency reliability (Cronbach's alpha) of the instrument has been found to be good for "total others" ratings. The reliabilities range from .68 (Transparency) to .87 (Emotional Self Awareness) with an overall average reliability of .78. The reliabilities of the "self" rating were not as good and ranged from .47 (Conflict Management) to .76 (Inspirational Leadership) with an overall average reliability of .63.

Validity Overview

A number of studies are presented in the manual that highlight the criterion and construct validity of the instrument. Research presented shows that ECI is related to outcomes such as an individual's life success (Sevinc, 2001), department performance (Nel, 2001), perceptions of leadership in a group (Humphrey, Sleeth & Kellet, 2001), sales performance (Lloyd, 2001), fire fighter performance (Stagg & Gunter, 2002), softball coaches win/loss record (VanSickle, 2004), and parishioner satisfaction (Brizz, 2004).

The ECI also shows good construct validity and is related to measures such as the MBTI sensing/intuiting and thinking/feeling dimensions but not the introversion/extraversion and judging/perceiving dimensions as expected (Burckle, 2000b). The ECI is correlated with affiliative and coaching leadership styles but not coercive and authoritative styles (Carulli & Com, 2003). It has also been shown that ECI is related to climate (Sala, 2003) although there is also evidence that ECI may not be directly related to climate but rather it affects climate through leadership style. Other research shows the ECI related to group emotional intelligence (Stubbs, 2005), and negatively related to irrational beliefs as hypothesized (Welpe, Tumasjan, Stich et al., 2005).

Two studies examined the discriminant validity of the ECI, i.e., that it is different from other concepts. The research shows that the ECI is not correlated with either critical thinking (Murensky, 2000) or personality traits as measured by Eysenck's Personality Questionnaire (Zadel, 2004).

Byrne (2003) conducted an overall validity study of the ECI using the self-scored version. He concluded the instrument shows good construct, discriminant, and criterion validity.

Introduction

Definition of Emotional Intelligence

Emotional intelligence is the capacity for recognizing our own feelings and those of others, for motivating ourselves and for managing emotions effectively in ourselves and others. An emotional competence is a learned capacity based on emotional intelligence that contributes to effective performance at work.

Background on the ECI

A Brief History of the Development of the ECI

The ECI is a 360-degree tool designed to assess the emotional competencies of individuals and organizations. It is based on emotional competencies identified by Dr. Daniel Goleman in *Working with Emotional Intelligence* (1998), and on competencies from Hay/McBer's *Generic Competency Dictionary* (1996) as well as Dr. Richard Boyatzis's Self-Assessment Questionnaire (SAQ).

Hay/McBer's *Generic Competency Dictionary* was originated by Lyle and Signe Spencer as documented in their book *Competence at Work* (1993), and revised by psychologist David McClelland after an extensive review of the literature. It is based on over 20 years of research initiated by Dr. McClelland (1973) with his seminal article, "Testing for Competence rather than Intelligence." Hay/McBer and other researchers have established that every core competency in the Dictionary reliably differentiates performance in a variety of organizations.

The Self-Assessment Questionnaire was initially developed by Dr. Boyatzis in 1991 for use with MBA and executive students to assess competencies in the Generic Model of Management used at the Weatherhead School of Management, Case Western Reserve University. The SAQ has shown a high degree of construct validity against a variety of behavioral and questionnaire measures. Since 1991, it has been used in numerous studies, including longitudinal research (Boyatzis, Baker, Leonard et al., 1995; Boyatzis, Cowen & Kolb, 1995).

Expanding upon Dr. Boyatzis's well-established evaluation measure, Dr. Boyatzis and Dr. Goleman developed a pool of items designed to capture the full spectrum of emotional competencies. Items were selected from this pool based on conceptual and logical considerations. Hay/McBer consultants further refined these items to reflect developmental scaling, which is characteristic of Hay/McBer's Generic Dictionary of Competencies. Developmental scales were designed and target levels were identified based on expert opinion and prior studies.

Boyatzis, Goleman, and Rhee (1999) outlined the rationale for the clustering and organization of emotional intelligence competencies. This important paper presents a more detailed explanation for the development of the ECI and the theoretical structure upon which it is based.

The Need for the ECI – 2.0

There were a number of psychometric properties of the ECI that were not what we desired: (1) it was reliable, but the competency scales showed intercorrelations that were too high (this resulted in a loss of factor differentiation and threatened the concept of EI having various components rather than being one construct or score); (2) there was a desire to reduce the number of items (the feedback from clients was that the test, at 110 items, was too long); (3) we wanted to increase the validity, which was also threatened if the scales were too highly correlated; and (4) in making changes, we wanted to ensure that we maintained the high scale reliability.

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The sample of over 10,000 ECIs taken between March, 1999 and May, 2001 provide "total others" item scores on over 4,000 managers and professionals from various countries. This data set was compiled and analyzed.

The method of analysis was as follows: (1) look for items with the best Cronbach's alphas to their intended scale; (2) using a confirmatory factor analysis with oblique rotations, look for items that loaded exclusively or predominantly on one scale and with other items from that intended scale; (3) drop items that had item-to-scale correlations with multiple scales greater than .60; (4) drop items for which more than 7% were left blank. This meant that people left this item blank and gave no response, suggesting it might be difficult to observe the behavior in others, or the item wording was confusing; (5) Look for items conceptually at the center of the definition of the EI competency; (6) look for items with distributed levels; and (7) identify items that had confusing or multiple phrases.

These steps were used to identify the best three items per scale. In most scales, this was possible. For a few there were still four or five of equal attractiveness. Cronbach's alphas were run using only these items and reliabilities were found to be similar to the earlier ones. This provided confidence that we could reduce the number of items in the test while maintaining the structural integrity of the instrument.

Since reverse scoring a few items could help minimize the effect of response set bias, we identified items that would be candidates for reverse scoring. We reviewed items from within this short list that had confusing or multiple phrases (calling for mixed or confusing logic) and made edits to reduce the number of words and increase clarity.

Emotional Intelligence Framework

The Emotional Competence Inventory 2.0 (ECI) measures 18 competencies organized into four clusters: Self-Awareness, Self-Management, Social Awareness, and Relationship Management.

Self-Awareness concerns knowing one's internal states, preferences, resources, and intuitions. The Self-Awareness cluster contains three competencies:

- **Emotional Awareness**: Recognizing one's emotions and their effects
- **Accurate Self-Assessment**: Knowing one's strengths and limits
- **Self-Confidence**: A strong sense of one's self-worth and capabilities

Self-Management refers to managing ones' internal states, impulses, and resources. The Self-Management cluster contains six competencies:

- **Emotional Self-Control**: Keeping disruptive emotions and impulses in check
- **Transparency**: Maintaining integrity, acting congruently with one's values
- **Adaptability**: Flexibility in handling change
- **Achievement**: Striving to improve or meeting a standard of excellence
- **Initiative**: Readiness to act on opportunities
- **Optimism**: Persistence in pursuing goals despite obstacles and setbacks

Social Awareness refers to how people handle relationships and awareness of others' feelings, needs, and concerns. The Social Awareness cluster contains three competencies:

- **Empathy:** Sensing others' feelings and perspectives, and taking an active interest in their concerns
- **Organizational Awareness:** Reading a group's emotional currents and power relationships
- **Service Orientation:** Anticipating, recognizing, and meeting customers' needs

Relationship Management concerns the skill or adeptness at inducing desirable responses in others. The Relationship Management cluster contains six competencies:

- **Developing Others:** Sensing others' development needs and bolstering their abilities
- **Inspirational Leadership:** Inspiring and guiding individuals and groups
- **Change Catalyst:** Initiating or managing change
- **Influence:** Wielding effective tactics for persuasion
- **Conflict Management:** Negotiating and resolving disagreements
- **Teamwork & Collaboration:** Working with others toward shared goals. Creating group synergy in pursuing collective goals.

A Summary of Changes in ECI 2.0 vs. ECI 1.0

Several name or label changes were made to clarify meaning of scales:

Leadership became Inspirational Leadership;
Trustworthiness became Transparency;
Achievement Orientation became Achievement
Self-Control became Emotional Self-Control; and
The Social Skills cluster became the Relationship Management cluster.

For ease of use and brevity, Conscientiousness and Communication were dropped. It has been clear from users of the ECI and recent research that these competencies do not differentiate outstanding performance for many managers or professional samples. Also, due to high intercorrelation and conceptual closeness, Building Bonds was integrated into Teamwork. The Optimism competency scale was added back onto the ECI (it had been dropped from the original when creating the ECI 1.0).

To summarize action taken on the scales:

Conscientiousness was dropped;
Communication was dropped;
Building Bonds was integrated into Teamwork; and
Optimism was added.

Another major action was to change the response set from a 1–7 scale (calling for the degree to which one felt the item was characteristic of the person being assessed). The new response set reflects one's observation of the frequency with which the person being assessed demonstrates the behavior or nature of the item. The six behavioral anchors are:

1 = Never
2 = Rarely
3 = Sometimes
4 = Often
5 = Consistently
6 = Don't Know

Using the ECI Appropriately

The ECI can be used by practitioners for assessment and development as well as researchers for studying emotional intelligence. There are a number of issues that must be understood about the instrument if it is to be used appropriately.

Developmental uses vs. Administrative uses

The ECI is not intended to be used for administrative purposes, e.g., selection, promotion, salary decisions, etc. The proper use of the ECI is for developmental purposes only. Although the instrument is valid across a broad array of situations and has been found to be reliable, it is designed to be general in nature. Each competency measured by the ECI may or may not be relevant to any specific job, thus it is inappropriate to use the ECI for administrative purposes without first validating it against the performance requirements for that job. However, because the ECI is intended to apply broadly, it is an excellent tool for developmental purposes. Feedback is only to be given by accredited users, thus, researchers should not give individual feedback to participants in their study unless they are accredited to do so. An overall summary of the study results without individual data is an appropriate level of feedback for unaccredited researchers to provide to participants.

Scoring

When the ECI is scored by the HayGroup, feedback reports reflect a proprietary algorithm for combining rater scores. These scores are different from those calculated by researchers, who generally use average-item scores. Where available, both the scored and average-item norms are reported later in this manual, be sure to use the appropriate ones for your purposes. Generally, practitioners are interested in the scored data while researchers are interested in the average-item data.

Clustering of Competencies

The ECI represents a set of competencies related to emotional intelligence. As with any competency model, one must not assume that a person must be rated high on all competencies to be effective. Boyatzis, Goleman, and Rhee (1999) argue that ECI competencies can be organized into clusters. Within any cluster the competencies have one of four relationships: "First, they may be parts of a whole and complement each other in functional behavior (e.g., Adaptability and Conscientiousness)... Second, they may be alternate manifestations. The specific competency used would vary by setting or stimulus... Third, the competencies within the cluster may be compensatory. That is, using one competency makes up for using less of another (e.g., Achievement Orientation and Initiative)... Fourth, the competencies within the cluster may be antagonistic. Frequent use of one "crowds" out the ease or possible use of another (e.g., Self-control vs. Initiative). If someone demonstrates a great deal of Self-control and inhibits their impulses and actions, they would have an increasingly difficult time demonstrating Initiative and starting things before anyone asks."

The implication of competency clustering is that it does not make sense, on a theoretical basis, to obtain an overall ECI score by simply averaging the scores for all competencies in all clusters. A researcher or practitioner must not assume that one set of competencies fits all situations. There are many ways to be equally effective. Defining the possible configurations that lead to effectiveness results in what is called an algorithm. To use the ECI appropriately a researcher should develop a hypothesis about how the competencies work together in the specific context being studied and develop a means of combining competency scores based on that algorithm.

For practitioners using the feedback report produced by The HayGroup, we outline a generic algorithm that has been shown to be effective for managers in many situations and is appropriate for assessment and development purposes. This generic algorithm is as follows: The three competencies in the social awareness cluster (emotional self-awareness, accurate self-assessment, and self-confidence) are mandatory and must all be present. In the self-management cluster, emotional self-control is mandatory. Transparency and adaptability are somewhat antagonistic. Transparency is about stability and reliability and adaptability is about flexibility and openness to change (Jacobs, 2001). A person must show one of these competencies. Finally, a person must show either achievement or initiative or optimism.

In the social awareness cluster, empathy is mandatory. Organizational awareness and service orientation are "alternate manifestations of each other, thus a person must have one or the other. Organizational Awareness tends to be used in higher-level management or executive positions where understanding and navigating the organization is critical for success. Service Orientation tends to be important in positions relating directly to customers (external or internal)" (Jacobs, 2001).

In the relationship management cluster, influence is mandatory. In addition to this competency, an individual should have one competency from the group of developing others, inspirational leadership, and change catalyst. They must also have either conflict management or teamwork and collaboration.

The nature of the competency model is such that although the competencies in each cluster are conceptually similar, a statistical factor analysis may not show that the items in a cluster hold together. The reason for that is, as discussed above, competencies in a cluster are not always complementary, i.e., you would not necessarily expect them to be found together; they may be alternate manifestations, compensatory, or antagonistic. Nevertheless, a confirmatory factor analysis conducted by Manual, Seriavos, and Boyatzis (2005) found that the theoretical model was a reasonable fit (chi-squared = 856, df = 55, p = 0.0, RMSEA = .047, NFI = .998, CFI = .998, RFI = .993).

Competency Levels

Each emotional intelligence competency can be exhibited at one of four levels. Any particular question in the ECI represents one level of one competency, thus there are 72 questions (18 competencies times 4 levels). Keep in mind that a match between competency level and the job may be more important to effectiveness than higher average scores. There is an optimal level of each competency for a given job. In some situations demonstrating too much of a competency can be just as problematic as having too little (Spencer & Spencer, 1993). The implication of this is that it is not always appropriate to assume that higher scores will translate into better performance. A person who is at the optimal score for each competency, as determined by the specific job, may perform better than someone with higher scores.

Based on our experience and data from thousands of managers, we have developed optimal levels for a generic model that applies to many management jobs. If the job requirements of the population you are measuring vary significantly from those of a general manager, you should consider whether or not the optimal levels that follow are appropriate for your population. The optimal level for the following competencies is level 4: self-confidence, adaptability, initiative, empathy, service orientation, and conflict management. The optimum level for all other competencies is level 3.

Researchers cannot calculate level information, thus, you will need to calculate whether a person is competent or not based on average-item scores. Table 1 shows the ranges of scores for a person to be considered low, medium, or high ability in each competency.

Use of Self Ratings

The ECI is intended to be used in a 360-degree mode. Self ratings alone may be useful for providing developmental feedback but they do not provide valid and reliable measures of emotional intelligence for research purposes. As a result, they should be used with extreme caution as the sole measure of emotional intelligence. Findings reported in this manual show that there is often a significant difference between self and other ratings. People high in accurate self assessment tend to have smaller gaps (Carulli & Com, 2003) (see pages 25-27 in this manual). The higher one's level in the organization and the lower one's performance, the more the self rating tends to be inflated (see section on self/other discrepancy on page 36). Table 2 shows the correlations between self and total other ratings for each competency. All correlations are significant at p<.01, however, they are relatively low.

Table 1: Average-Item scores equivalent to high, medium, and low competency levels

ECI 2.0 Cluster	Competency	Low Range	Medium Range	High Range
Self-Awareness	Emotional Self-Awareness	< 3.10	3.10 to 3.54	> 3.54
	Accurate Self-Assessment	< 3.60	3.60 to 3.92	> 3.92
	Self-Confidence	< 4.20	4.20 to 4.45	> 4.45
Self-Management	Emotional Self-Control	< 3.78	3.78 to 4.07	> 4.07
	Transparency	< 3.50	3.50 to 3.84	> 3.84
	Adaptability	< 3.72	3.72 to 3.98	> 3.98
	Achievement	< 3.75	3.75 to 4.04	> 4.04
	Initiative	< 3.30	3.30 to 3.60	> 3.60
	Optimism	< 3.98	3.98 to 4.25	> 4.25
Social Awareness	Empathy	< 3.92	3.92 to 4.21	> 4.21
	Organizational Awareness	< 3.68	3.68 to 4.02	> 4.02
	Service Orientation	< 4.06	4.06 to 4.38	> 4.38
Relationship Management	Developing Others	< 3.66	3.66 to 4.03	> 4.03
	Inspirational Leadership	< 3.71	3.71 to 4.08	> 4.08
	Change Catalyst	< 3.63	3.63 to 3.93	> 3.93
	Influence	< 3.55	3.55 to 3.88	> 3.88
	Conflict Management	< 2.95	2.95 to 3.26	> 3.26
	Teamwork & Collaboration	< 3.98	3.98 to 4.25	> 4.25

Table 2: Correlation between self assessment and total other ratings.

ECI 2.0 Cluster	Competency	Average-Item (N=19833)	Scored (N=6308)
Self-Awareness	Emotional Self-Awareness	0.20	0.25
	Accurate Self-Assessment	0.20	0.29
	Self-Confidence	0.31	0.30
Self-Management	Emotional Self-Control	0.43	0.43
	Transparency	0.18	0.15
	Adaptability	0.14	0.16
	Achievement	0.25	0.22
	Initiative	0.31	0.32
	Optimism	0.27	0.27
Social Awareness	Empathy	0.29	0.25
	Organizational Awareness	0.30	0.31
	Service Orientation	0.27	0.20
Relationship Management	Developing Others	0.30	0.29
	Inspirational Leadership	0.31	0.28
	Change Catalyst	0.35	0.32
	Influence	0.31	0.30
	Conflict Management	0.26	0.25
	Teamwork & Collaboration	0.27	0.30

Note: All correlations significant at p < .01

What is Considered Valid Data

When collecting ECI data it is important to recognize that all of the data collected may not be useable. When the instrument is scored by the Hay Group we discard information from a rater if the number of "don't know" responses exceeds 25% for that rater. The rationale for this is that the high level of "don't know" responses appears to indicate that the person does not have enough information to accurately assess the person. For confidentiality reasons we also insist on a minimum of two raters in each rating category. If there is only one rater in a category, we do not include that category of rater in the final scores.

For research purposes a single rater in a category does not pose a threat of confidentiality and can be used freely. The decision as to whether or not to include a rater if the number of "don't knows exceeds 25% is a bit more difficult. The researcher must make a decision as to whether the high number of "don't know" responses results from the rater not knowing the ratee very well or is there another explanation, for example, perhaps the situation in which the rater has observed the ratee is one where a number of competencies would not normally be demonstrated. If this were the case, then information on the remaining competencies could be considered valid even though there were a large number of "don't know" responses overall.

Finally, to get an accurate assessment of a person's emotional intelligence, you need multiple raters. Each rater sees different aspects of the person, which means any one individual's ratings might be skewed. We recommend a minimum of 4 to 5 raters, preferably with different perspectives of the person, i.e., they see the person in different contexts.

Reliability ECI 2.0

Reliability refers to the consistency or stability of measures or observations. Essentially, if a person is measured twice on the same measure it should roughly yield the same score both times; that is, it should be reliable. For example, more than one judge (i.e., rater) might rate the behavior of the same person or event and the correlation between those ratings would give an indication of the reliability of ratings, or observer agreement. Alternatively, correlations between ratings by the same judge at different times would provide some indication of stability. It might indicate the consistency of the behavior, the consistency of the rater, or both over time (Rosenthal & Rosnow, 1991).

When assessing the reliability of survey instruments, typically two indicators are provided: test-retest reliability and internal consistency. Test-retest reliability refers to the stability of a measure over time. For example, a survey is administered twice to the same individuals with a period of time between assessments (typically two weeks to four months), and correlations are computed to determine how stable the test is from one administration to another. Internal consistency refers to the average of the intercorrelations among all the single test items. Chronbach's alpha is the most commonly used indicator of internal consistency. This procedure estimates reliability from the consistency of item responses from a single assessment.

Internal Consistency for the ECI 2.0

Table 3 presents Chronbach's alpha internal consistency coefficients for the ECI 2.0 competencies. For total others ratings, the alpha coefficients range from .68 (Transparency) to .87 (Emotional Self Awareness) with an overall average internal consistency coefficient of .78. For self ratings, the alpha coefficients range from .47 (Conflict Management) to .76 (Inspirational Leadership) with an overall average internal consistency coefficient of .63. These results suggest that total others ratings are more stable and reliable than self ratings although no statistical tests were conducted to determine whether the difference is significant or meaningful. These findings do support our general contention that self ratings are less reliable and consequently less valid (i.e., poor predictor of performance relative to total others' ECI ratings).

Reliability coefficients were based on aggregated ratings with each participant as the unit of analysis. Each participant was rated on average by 10.2 raters (SD=5.6) and results are based on 246,974 total ratings aggregated by participant. Of the 246,974 ratings, 21,365 (8.7%) were managers, 67,748 (27.4%) were direct reports, 69,139 (28%) were peers, 43,297 (17.5%) were "other," and 24,868 (10.1%) were clients.

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Table 3: Chronbach's alpha coefficients for self and total others ECI 2.0 ratings. Scores based on average item scores.

ECI 2.0 Cluster	Competency	Self Rating (N=20557)	Total Others Rating (N=22089)
Self-Awareness	Emotional Self-Awareness	.70	.87
	Accurate Self-Assessment	.51	.77
	Self-Confidence	.71	.79
Self-Management	Emotional Self-Control	.71	.83
	Transparency	.50	.68
	Adaptability	.54	.73
	Achievement	.61	.77
	Initiative	.50	.70
	Optimism	.68	.75
Social Awareness	Empathy	.65	.80
	Organizational Awareness	.68	.80
	Service Orientation	.73	.86
Relationship Management	Developing Others	.72	.85
	Inspirational Leadership	.76	.86
	Change Catalyst	.70	.82
	Influence	.63	.76
	Conflict Management	.47	.73
	Teamwork & Collaboration	.54	.75

Test-Retest Reliability

Although no specific test-retest reliability studies have been conducted with the ECI, other pre- and post-assessment research provides reasonable evidence for adequate levels of test-retest reliability. A sample of 20 Brazilian executives from a large consumer retail organization were assessed twice on the ECI with seven months between assessments. This period of time is higher than what is typically recommended (Anastasi, 1982). Furthermore, between assessments, the executives participated in an EI development program; therefore results must be interpreted with caution. This data also suggests that the ECI may be sensitive to change because stability coefficients for the total others ratings were only moderately high, while stability coefficients for self scores were very low (see Table 4).

Table 4: Test-retest stability coefficients for Self and Total Others ECI 1.0 ratings with Brazilian consumer retail executives.

ECI 1.0 Cluster	Competency	Self Rating (N=20)	Total Others Rating (N=20)
Self-Awareness	Emotional Self-Awareness	.23	.55
	Accurate Self-Assessment	.26	.58
	Self-Confidence	.33	.69
Self-Management	Self-Control	.43	.49
	Trustworthiness	.22	.67
	Conscientiousness	.56	.92
	Adaptability	.55	.52
	Achievement Orientation	.19	.60
	Initiative	.15	.45
Social Awareness	Empathy	.61	.62
	Organizational Awareness	.22	.82
	Service Orientation	.05	.41
Social Skills	Developing Others	.55	.75
	Leadership	.47	.56
	Influence	.30	.19
	Communication	.08	.56
	Change Catalyst	.35	.69
	Conflict Management	.43	.39
	Building Bonds	.44	.72
	Teamwork & Collaboration	.82	.57

Validity

The validity of psychological tests generally refers to the degree to which a measure or questionnaire actually measures what it's supposed to measure. For example, a grade in a math course might typically be thought to reflect (measure) math ability, but it might also reasonably reflect other characteristics (e.g., motivation, career goals, work ethic, parents' educational background, family income, etc.). In fact, math grades might generally relate to grades in other courses, which in turn might correlate with more psychological characteristics like self-esteem, self-efficacy, and even lack of depression. In other words, understanding the true nature of your construct can be complicated.

Two types of validity research help us address these issues: content and construct validity. Content validity addresses whether a test adequately samples the relevant material it purports to cover. This is typically done qualitatively by a team of "experts" within a field.

Alternatively, construct validity refers to the degree to which a test or questionnaire is a measure of the characteristic of interest. This type of evidence typically takes the form of discriminant and convergent validity. This simply refers to whether the test correlates with other measures that ought to be conceptually related while correlating less with those that it should not be associated. For example, the ECI ought to correlate positively with self-esteem (convergent) and negatively with depression (convergent), and not correlate with cognitive ability (discriminant).

Finally, and most important to the purposes of the ECI, criterion validity is the degree to which the test or measure correlates with some outcome criteria. For the ECI, we have conducted research to validate the ECI against various outcome measures of performance in the workplace. For example, this research might test whether a manager high in EI tends to have lower turnover rates than those managers low in EI. *Concurrent validity* is tested when the measure of interest (e.g., the ECI) and the criterion or outcome are both assessed simultaneously, while *predictive validity* is measured when the outcome is collected some period of time after the variable of interest is assessed.

Overall Validity Study Using ECI 2.0

Byrne (2003) examined the construct validity of the ECI 2.0 but used only the self-report measure in his study. Specifically, he asked the following research questions.

- Does ECI have significant and meaningful relationships with outcome measures related to leadership and other aspects of work-related behavior?
- Are the ECI measures distinct from measures of personality and cognitive ability?
- Does ECI explain variance in leadership and other aspects of work-related behavior that is not explained by personality and cognitive measures?

Data bearing on ECI construct validity includes relationships among the following variables:

- the competencies that describe emotional intelligence as outlined by Goleman, and colleagues
- the Big Five personality factors outlined by Costa & McCrae (1990; Costa & McCrae, 1992),
- the Managerial Skills Questionnaire (MSQ) by Smither & Seltzer,
- cognitive abilities as demonstrated by standardized tests and scholastic achievement
- team evaluation of members' contributions

Additionally, demographic data, age, gender, ethnicity, and the number of years of work experience were considered. The sample included 325 students in graduate programs at three universities. The sample had a mean age of 31.23 years and included 40.2% females and 44.3% who identified themselves as

other than "white Caucasian." All respondents were working or had been employed in a number of organizations. The average number of years of work experience was 8.463.

Results supported the construct validity for the ECI. Confirmatory factor analysis results suggested that the ECI measures a set of factors that is distinct from personality variables. Results also showed that the ECI was predictive of leadership and related work behavior and explained significant variance in performance after age and personality variables were controlled. Additionally, this study demonstrated convergent, discriminant and internal validities.

Table 5 shows correlations between three measures of cognitive ability (Undergraduate GPA, Graduate GPA, and GMAT scores). As theoretically predicted, there were no significant correlations, indicating good discriminant validity. The last five columns of the same table show correlations with NEO-FFI personality variables. All variables show highly significant correlations with the ECI clusters, indicating good construct validity.

Table 5: Correlations – ECI 2.0, Cognition, Personality

ECI 2.0 Cluster	UGPA	GGPA	GMAT	NEO_N	NEO_E	NEO_O	NEO_A	NEO_C
Self-Awareness	-0.008	0.062	-0.071	-0.366**	0.380**	0.295**	0.257**	0.253**
Self-Management	0.081	0.039	-0.050	-0.474**	0.467**	0.329**	0.216**	0.257**
Social Awareness	-0.035	0.050	-0.130	-0.389**	0.378**	0.269**	0.235**	0.372**
Relationship Management	-0.007	-0.008	-0.125	-0.417**	0.569**	0.340**	0.221**	0.263**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Byrne (2003) also examined criterion validity of the ECI 2.0. He looked at four outcome measures: 1) Peer Nominations (NCPEER2); 2) Promotion/Age index NPROMAGE; 3) Managerial Skills score (MSQ_AVG); 4) observed Videotape behavior (VID_AVG3). Table 6 shows the results of these correlations. The ECI shows good criterion validity as seen from the fact that all correlations are significant except the correlation between self-management and peer ratings and the correlation between self-awareness and the managerial skills score.

Table 6: Correlations between ECI 2.0 and Performance Measures

Outcome Measure	Self-Awareness Cluster	Self-Management Cluster	Social Awareness Cluster	Relationship Management Cluster
NCPEER2	0.180**	0.110	0.156*	0.202**
NPROMAGE	0.150*	0.213**	0.202**	0.236**
MSQ_AVG	0.112	0.174*	0.289**	0.280**
VID_AVG3	0.165**	0.183**	0.246**	0.248**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Finally, Byrne (2003) examined whether the ECI contributes to explaining variance above and beyond the NEO-FFI. He examined each performance variable separately. In each case, the ECI accounted for a greater proportion of the variance. The results of the analysis demonstrate that the ECI does make contributions that are distinct, and in addition to, the NEO-FFI instrument.

Criterion Validity Using ECI 1.0

Emotional Intelligence and U.K. College Principals

Pearson correlations demonstrated principals' Emotional Intelligence scores were significantly associated with measures of college/student performance (Sala, 2003). Principals' Self-Awareness and Social Awareness cluster ratings were significantly associated with college retention rates (see Table 7).

Principals with higher ECI cluster scores for Self- and Social Awareness had better retention rates of students—that is, their colleges were better at retaining their students from the beginning of the school year to the end of the school year. Also, although not statistically significant (due to small sample), a pattern emerged between Principals' ECI cluster scores and a measure of student academic achievement. This measure was based on national standardized objective tests that were consistent across all colleges.

Although these measures do not seem to be directly tied to Principals' behavior, it seems reasonable that these important student and college outcomes are affected through Principals' effective leadership and management practices (Sala, 2003).

Table 7: Pearson correlations between Emotional Intelligence and two measures of performance for U.K. College Principals (N=92)

ECI 1.0 Cluster	Retention Rate (n = 90)	Academic Achievement (n = 25)
Self-Awareness	.20*	.23
Self-Management	.16	.17
Social Awareness	.18*	.15
Social Skills	.16	.25

*p < .05

Emotional Intelligence and Performance in the Turkish Finance Sector

Sevinc (2001) conducted a study utilizing the ECI with a sample of Turkish participants working in the finance sector (banks, insurance, securities). Participants were contacted through a university alumni association. Sevinc obtained several measures of self-reported objective and subjective indicators of career success. Objective measures of success included salary, position level, and number of promotions. Subjective career success was based on a self-report survey that included the following components: financial, hierarchical, interpersonal, job, and life success (see Table 8).

Ninety-one graduates were contacted and 71 returned self-scored ECI surveys (response rate = 78%). Participants also were provided with two copies of the ECI to be completed and returned by either a peer, direct report, or manager. Only 40 participants had other ECI ratings returned (response rate = 44%) and the majority of those returned were completed by only one person. Participants were 58% (41) male and 42% (30) female. Since participants were obtained from alumni records of those who graduated in 1980, all participants were between ages the of 31 and 36.

 0511-9889-HAYG

Table 8: Sample survey items of "subjective career success" (Sevinc, 2001).

Item	Component
Receiving fair compensation compared to my peers	Financial Success (1)
Earning as much as I think my work is worth	Financial Success (1)
My income is very much what is expected at this stage in my career	Financial Success (2)
I am satisfied with progress toward meeting goals for income	Financial Success (2)
Pleased with the promotions I have received so far	Hierarchical Success (1)
Reaching my career goals within the time frame I set for myself	Hierarchical Success (1)
I am satisfied with success achieved in career or line of work	Hierarchical Success (2)
Going to reach all of my career goals	Hierarchical Success (1)
Respected by my peers	Interpersonal Success (1)
Having my superior's confidence	Interpersonal Success (1)
Accepted by my peers	Interpersonal Success (1)
Having enough responsibility on my job	Job Success (1)
Fully backed by management in my work	Job Success (1)
In a job which offers me the chance to learn new skills	Job Success (1)
In a position to do mostly work which I really like	Job Success (1)
Happy with my private life	Life Success (1)
Enjoying my non-work activities	Life Success (1)
Satisfied with my life overall	Life Success (1)

Note: (1) = Gattiker & Larwood (1986); (2) = Chay, Aryee, & Tan (1994).

Table 9 reveals the pattern of correlations that emerged with the various criterion measures. Self-reported salary (forced-choice format) was significantly correlated with all four ECI clusters, indicating that those who reported higher salaries tended to be rated by others as higher on emotional intelligence than those who reported lower salaries. A marginal finding was found for position level and social skills—suggesting that those with higher positions (e.g., senior manager) were rated by others as having higher social skills.

For subjective career success, several significant correlations emerged between ECI clusters and job and life success. Participants perceived by others as high in emotional intelligence tended to report high job success. Furthermore, those perceived by others as high in emotional intelligence tended to report greater satisfaction in their personal life.

Participants rated higher in Emotional Intelligence reported higher levels of job success; that is, they feel supported by management in their work and they feel challenged, responsible, and accountable in their work. Participants rated higher in EI also reported greater life success. They reported being happier and more satisfied with their private life.

Table 9: Correlations between ECI 1.0 total others ratings and objective and subjective career success with a sample of Turkish financial sector managers (Sevinc, 2001).

Self-Rating		Emotional Intelligence (Total Others Ratings)			
		Self-Awareness	Self-Management	Social Awareness	Social Skills
Objective Career Success	Salary (N=38)	.30†	.37*	.43*	.40*
	Position Level (N=40)	.09	.10	.19	.29†
	Number of Promotions (N=29)	.03	-.06	-.17	-.10
Subjective Career Success	Job Success (N=40)	.12	.33*	.26†	.34*
	Financial Success (N=40)	-.21	-.07	-.16	-.15
	Hierarchical Success (N=40)	-.02	.16	.05	.01
	Interpersonal Success (N=40)	.00	.17	.01	.10
	Life Success (N=40)	.29†	.46*	.38*	.46*

†$p < .10$; *$p < .05$;

As expected, significant correlations between self-reported ECI ratings and self-reported objective and subjective career success were more frequent and robust than those based on total others ratings of ECI competencies. Table 10 reveals the pattern of correlations that emerged with the various criterion measures.

Very similar to the pattern of findings with total others ratings, self-reported salary was significantly correlated with all 4 ECI clusters, indicating that those who reported higher salaries tended to rate themselves higher on Emotional Intelligence than those who reported lower salaries. A marginal finding was found for position level and social skills—suggesting that those with higher positions (e.g., senior manager) rated themselves as having higher social skills than those lower-level positions.

For subjective career success, several significant correlations emerged between ECI clusters and job, interpersonal, and life success. Marginal findings were also observed with hierarchical success as well. Participants who rated themselves higher in emotional intelligence tended to similarly report higher job success, higher hierarchical success, higher interpersonal success, and higher life success.

Participants who rated themselves higher in emotional intelligence reported higher levels of job success; that is, they felt supported by management in their work and they felt challenged, responsible, and accountable in their work. Participants who rated themselves higher in EI also reported greater life success. They reported being happier and more satisfied with their private life. Higher EI self scores were also associated with hierarchical success (i.e., reaching career goals) and with interpersonal success (i.e., respected and accepted by peers and superiors).

Table 10: Relationship between ECI 1.0 self ratings and objective and subjective career success with a sample of Turkish financial sector managers (Sevinc, 2001).

Self-Rating		Emotional Intelligence (Self-Rating)			
		Self-Awareness	Self-Management	Social Awareness	Social Skills
Objective Career Success	Salary (N=68)	.43*	.37*	.37*	.41*
	Position Level (N=71)	.15	.16	.10	.22†
	Number of Promotions (N=59)	-.13	-.14	-.12	-.17
Subjective Career Success	Job Success (N=71)	.32*	.37*	.28*	.43*
	Financial Success (N=71)	-.04	-.07	-.01	.01
	Hierarchical Success (N=71)	.14	.21†	.16	.24*
	Interpersonal Success (N=71)	.48*	.47*	.40*	.53*
	Life Success (N=71)	.24*	.29*	.14	.35*

†$p < .10$; *$p < .05$

Emotional Intelligence and South African Call Center Agents

Nel (2001) conducted a study to examine the relationship between emotional intelligence and job performance. She administered the ECI to a sample of call center agents working at the head office of a major life insurance agency located in the Western Cape, South Africa. Participants were selected based on a stratified random selection procedure from the following call center roles: client services, sales, and administration. One hundred fifty-three questionnaires were administered and 135 were returned completed (response rate = 88.2%). The call center agents were divided as follows: 33% (n=44) client services, 34% (n=47) sales, and 33% (n=44) administration. Agents were rated on the ECI by their team leader.

Job performance was an overall rating that was provided by the participating organization. The rating was based, in part, on objective, computer-assessed indexes of performance such as productivity on systems, closing rate, lapse index, and amount of calls handled—and subjectively on quality of conversation.

Table 11 reveals several significant correlations between ECI competencies and call center performance. Results shown in Table 11 suggest a moderate relationship between agent emotional intelligence and performance within the three call center environments.

Table 11: Correlations between ECI 1.0 scores and performance for call center agents.

ECI 1.0 Cluster	Emotional Intelligence (ECI) Competencies	Correlations with performance for agents within each department		
		Client Services (n=44)	Sales (n=47)	Administration (n=44)
Self-Awareness	Emotional Self-Awareness	.23	.33	.46
	Accurate Self-Assessment	.38	.33	.46
	Self-Confidence	.61	.47	.73*
Self-Management	Self-Control	.17	.26	.48
	Trustworthiness	.66*	.53*	.45
	Conscientiousness	.49*	.45	.57*
	Adaptability	.37	.31	.58*
	Achievement Orientation	.64*	.35	.63*
	Initiative	.58*	.42	.72*
Social Awareness	Empathy	.22	.42	.45
	Organizational Awareness	.49*	.25	.48
	Service Orientation	.27	.39	.46
Social Skills	Developing Others	.30	.30	.68*
	Leadership	.49*	.26	.62*
	Communication	.41	.32	.46
	Influence	.53*	.37	.63*
	Change Catalyst	.57*	.43	.58*
	Conflict Management	.45	.26	.59*
	Building Bonds	.35	.48	.55*
	Teamwork & Collaboration	.44	.41	.57*

EI, IQ, and Perceptions of Leadership

Humphrey, Sleeth, and Kellett (2001) conducted an assessment center exercise with organizational behavior students (both undergraduate and MBA students) at Virginia Commonwealth University, School of Business. The purpose of their study was to determine whether both empathy and cognitive ability are associated with perceptions of leadership.

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The assessment exercises involved two parts: (1) an in-basket exercise in which participants select tasks from a variety of complex and simple tasks; and (2) group decision-making tasks.

After completing the group decision-making tasks, participants were asked to rate themselves and each other on a variety of leadership skills and personality measures. Using structural equation modeling, results showed that both emotional intelligence (e.g., empathy) and cognitive ability (e.g., ability to perform complex tasks and GPA) influence perceptions of leadership in small groups. The findings reveal the importance of empathy in leadership.

High Performance and High Potential at Johnson & Johnson

Cavallo and Brienza (2002) conducted a study with 358 managers across the Johnson & Johnson Consumer & Personal Care Group to determine whether leadership competencies distinguished high- from average-performance and also high- and average-potential. Based on peer, subordinate, and supervisor ratings on the ECI, results showed that high-performance managers were rated significantly higher than average-performing managers on the following ECI competencies by rater group (see Table 12).

Table 12: Competencies, by rater group, on which high-performing managers were rated significantly higher than average-performing managers.

Supervisor Ratings	Peer Ratings	Direct Report Ratings
Self-Confidence	Self-Confidence	Self-Confidence
Trustworthiness	Achievement Orientation	Self-Control
Adaptability	Organizational Awareness	Trustworthiness
Achievement Orientation	Developing Others	Adaptability
Initiative	Leadership	Achievement Orientation
	Influence	Initiative
	Change Catalyst	Empathy
	Communication	Organizational Awareness
		Developing Others
		Service Orientation
		Leadership
		Influence
		Communication
		Change Catalyst
		Conflict Management
		Building Bonds
		Teamwork

Only supervisor and peer ECI ratings were found to be associated with management potential. Table 13 shows the competencies that were found to be significantly associated with high potential.

Table 13: Competencies, by rater group, significantly associated with high potential.

Supervisor Ratings	Peer Ratings	Direct Report Ratings
Accurate Self-Assessment	Self-Confidence	None
Self-Confidence	Achievement Orientation	
Adaptability	Initiative	
Achievement Orientation	Leadership	
Initiative	Change Catalyst	
Service Orientation		
Leadership		
Influence		
Communication		
Change Catalyst		
Conflict Management		
Building Bonds		

Emotional Intelligence and the Performance of school Principals

In the most comprehensive and sophisticated competency model of public elementary, middle, and high school principals in the US, Williams (2003) assessed EI with the ECI. She collected data on the principals' organizational climate from a teacher's survey, nominations for outstanding principals from teachers, nominations from principals themselves, and nominations from the Superintendent's offices. The competencies in the Self-Management and Social Skills clusters differentiated the outstanding from the average principals significantly in regression analyses.

Leadership and Emotional Intelligence

Leadership is a dynamic interpersonal process incorporating a wide array of cognitive as well as emotional competencies and operating in a gendered social context. Hopkins (2004) investigated the repertoire of competencies and leadership styles demonstrated by 30 female and 75 male leaders in a financial institution that are associated with their success. Performance and potential were rated by managers and collected from HR for the three years proceeding the study. Success scores were calculated by multiplying the performance and potential scores and averaging over three years. The participants were measured with both the ECI and the Management Styles Questionnaire. For the ECI there was an average of 12 raters for each leader. Some of the raters used the ECI 1.0 and the remainder used the ECI 2.0. The author used only the questions and constructs that were common to both in her analysis.

The results showed significant differences in males and females for the following competencies and leadership styles: Males scored higher on self-confidence, service orientation, influence and use of the pacesetting style. Hopkins (2004) next examined whether a broader repertoire of emotional intelligence competencies would result in a broader repertoire of leadership styles. She measured the repertoire of emotional intelligence skills by calculating a total ECI score. This score was the average of all individual competency scores. The leadership repertoire was calculated by determining the total number of styles that scored above the median. There were no significant relationships found between either the emotional intelligence repertoire or the leadership styles repertoire and success. There were also no significant relationships found between the emotional intelligence repertoire and the leadership repertoire at the $p<.05$ level.

Hopkins (2004) then examined the relationship between the competency clusters and success. She found that relationship management is significantly related to success for males but not for females. She also found that when males and females have equivalent total ECI scores that males were rated as more

successful (p=.015, r-squared = .034). A similar result was obtained for the relationship management competencies. Males were more likely to be rated successful when they had similar levels of relationship management as females (p=.011, r-squared = .039).

Emotional Intelligence and Performance: Filipino First-Line Supervisors

Sergio (2001) conducted research to explore the relationship between emotional intelligence and mental ability as predictors of job performance among first-line Filipino plant supervisors in manufacturing organizations. One hundred thirty-four plant supervisors from two multinational manufacturing firms were assessed on the ECI and a standard mental ability test; supervisor performance appraisals were also obtained. It was found that both mental ability ($\chi^2 = 28.57$, $p < .05$) and emotional intelligence ($\chi^2 = 34.27$, $p < .05$) were associated with job performance ratings. Emotional intelligence and mental ability were not significantly correlated ($r = .18$, $p > .05$). Sergio (2001) concluded that both cognitive and emotional ability/intelligence were independent and important contributors to performance at work.

Emotional Intelligence and Team Performance

Rapisarda (2002) studied 18 study groups in an EMBA program at Case Western Reserve University. The sample consisted of 15 females and 76 males. The participants were assessed with the 360-degree version of the ECI. Team performance was measured by a questionnaire filled out by the participants. It measured their perception of team cohesion and their perception of the team's performance. Faculty were also asked to rate team cohesiveness and performance. The findings show that nine competencies— achievement orientation, empathy, influence, communications, leadership, conflict management, self-control, adaptability, and building bonds—were significantly correlated with student ratings of cohesiveness. Two competencies, achievement orientation and empathy, were positively correlated with (marginal significance of $p < .10$) the student ratings of performance. Achievement orientation and influence were positively correlated with ($p < .10$) the faculty ratings of cohesiveness.

Criterion Validity Using ECI 2.0

ECI 2.0 and Sales Performance at Bass Brewers in the U.K.

Utilizing the ECI 2.0, a study was conducted to determine whether EI competencies were associated with sales performance at Bass Brewers in the U.K.(Lloyd, 2001). The sample consisted of 33 Area Development Managers (ADM). These managers are responsible for building volume and profit, implementing national promotional activity, and resolving customer service issues.

Lloyd (2001) developed an "overall performance measure" (OPM), which consisted of hard, soft, and personal development indicators. The OPM included 1) a "ready for promotion" rating, 2) the average number of new brand installations, 3) the average number of new accounts gained, 4) a customer service audit, 5) an annual performance rating based on mutually agreed-on targets, and 6) the number of job band changes. Lloyd (2001) reported a strong relationship between EI scores and performance—those ADMs who performed best were more likely to have higher EI ratings.

ECI 2.0 and Performance with U.K. Fire Fighters and Fire Officers

A sample of 67 fire fighters and officers from the U.K. were assessed using the ECI 2.0 (Stagg & Gunter, 2002). The participants provided self scores and they were rated on the ECI by their managers, peers, and direct reports. Participants were also rated on the following criteria: interpersonal ability, management effectiveness, personal style, and problem solving.

Results from Table 14 show that overall, ECI ratings correlate with each performance measure. Participants' rank does not seem to correlate with ECI ratings.

Table 14: Correlations between ECI 2.0 total other ratings and performance ratings with U.K. Fire Fighters and Fire Officers (N=67).

| ECI 2.0 Cluster | Competency | Performance Measure | | | | Rank |
		Inter-personal Ability	Manage-ment Effective-ness	Personal Style	Problem Solving	
Self-Awareness	Emotional Self-Awareness	.31*	.41**	.46**	.27*	.13
	Accurate Self-Assessment	.50**	.19	.28*	.30*	-.02
	Self-Confidence	.39**	.41**	.35**	.45**	-.15
Self-Management	Emotional Self-Control	.18	.24*	.43**	.17	.21†
	Transparency	.39**	.33**	.38**	.37**	-.19
	Adaptability	.36**	.38**	.38**	.48**	.11
	Achievement	.28**	.45**	.54**	.55**	-.16
	Initiative	.09	.05	.17	.42**	.03
	Optimism	.38**	.32**	.46**	.39**	-.15
Social Awareness	Empathy	.49**	.29*	.54**	.39**	.04
	Organizational Awareness	-.03	.54**	.06	.37**	-.13
	Service Orientation	.38**	.36**	.43**	.30*	-.17
Relationship Management	Developing Others	.45**	.45**	.46**	.39**	-.25*
	Inspirational Leadership	.53**	.54**	.54**	.49**	-.13
	Change Catalyst	.46**	.37**	.51**	.53**	-.17
	Influence	.52**	.39**	.48**	.48**	-.06
	Conflict Management	.45**	.47**	.51**	.43**	.01
	Teamwork & Collaboration	.61**	.27**	.47**	.37**	.03

†p < .10; *p < .05; ** p < .01

Leadership, ECI 2.0, and Performance in Public Accounting Firm

In a study by Bresnik (2004), 88 employees of a public accounting firm (59 female, 29 male) were measured on emotional intelligence using the ECI 2.0 and performance using the firm's internal 360-degree HR assessment. The author found no relation between emotional intelligence and performance, however, she concluded that the measure of performance was flawed. It did not actually measure what was valued in the organization and did not represent criteria actually used for promotion. Promotion decisions were made through a separate "roundtable" process whereby managers sat in a room and ranked employees using a forced normal curve.

Bresnik (2004) did a further analysis to examine if there is a relationship between an employee's level in the organization and their emotional intelligence. She found that, in general, the higher levels in the organization exhibited higher levels of emotional intelligence competencies. One notable exception was that the highest level (partner) had the lowest scores on inspirational leadership. The researcher pointed out that the lack of inspirational leadership at the top levels was something HR considered a problem and was working on.

This study is interesting in that it demonstrates that the ECI can serve as a valuable diagnostic tool for organizations. In this study results were not in line with expected relationships between ECI and performance, however, this was more indicative of internal weaknesses than a failure to support predicted relations found in many other studies.

ECI 2.0 and the performance of Division I softball coaches

Van Sickle (2004) studied the relation between emotional intelligence and the performance (measured by win/loss record) of 16 Division 1 softball coaches (2 male, 14 female). A total of 223 players completed the ECI 2.0 as well as the Athlete Satisfaction Questionnaire (ASQ) developed by Reimer & Chelladurai (1998). She first examined whether the self report and the ratings by team members differed. With the exception of self-confidence, achievement orientation, initiative, and teamwork and collaboration, all competencies showed significant differences (p<.01 for all but influence) between self and other ratings. Three MANOVAs were conducted to examine whether the length of time a player played for a coach, role on the team, and scholarship received affected the rating of emotional intelligence and satisfaction. Van Sickle found that length of time playing for a coach did affect ratings of emotional intelligence but not satisfaction and vice versa for role played on the team and amount of scholarship. Using a multiple regression with all emotional intelligence clusters there was a significant relation (p < .05) between the self-awareness and social awareness clusters and the coach's performances measured by current win/loss percentage. There was also a significant relation (p < .05) between satisfaction and performance.

Van Sickle also examined the relation between overall win/loss percentage and both emotional intelligence and satisfaction. She found that only relationship management was significantly related to overall performance. Finally, she examined whether emotional intelligence is related to satisfaction and found that only the self-awareness cluster showed a significant relationship. One must be careful in interpreting the results relating emotional intelligence to performance and satisfaction because they were done with a multiple regression with all emotional intelligence clusters entered as independent variables. Since there are relatively high correlations among the clusters this analysis potentially suffers from multicollinearity problems.

ECI 2.0 and the performance of Parish leaders

Brizz (2004) studied the relationship between emotional intelligence of parish leaders and parish vibrancy as measured by parishioner satisfaction and support. Brizz also hypothesized that the relationship between emotional intelligence and parish vibrancy will be moderated by the presence of a parish school and the size of the parish. The sample consisted of 32 pastors who agreed to participate in the study. For each pastor, three parishioners and two staff members completed the ECI 2.0 questionnaire. A composite score of sixteen of the eighteen competencies was used as the independent variable, initiative and conflict management were dropped from the analysis. Emotional intelligence competencies of the pastor significantly predicted parish vibrancy as measured by parishioner satisfaction. It did not predict parish vibrancy as measured by parishioner support. The hypothesized moderating effects concerning the presence of a parish school and size of the parish were found not to alter the impact of the pastor's leadership on parishioner satisfaction.

Construct Validity Using ECI 1.0

Type A and Type B Personality in Greek Bank Employees

Type A personalities have emotions and behaviors characterized by ambition, hostility, impatience, and a sense of constant time pressure. Type A individuals are more likely to suffer stress-related disorders and physical illnesses (e.g., coronary disease). Type A personality is a major health risk. Contrarily, Type B personalities are characteristically relaxed, calm, not preoccupied with achievement, and able to enjoy leisure time. Individuals with Type B personalities enjoy better health, including decreased likelihood for coronary disease.

Type A behaviors reside in three domains: 1) Competitive Achievement Orientation, which is the tendency to be very competitive and goal-oriented without a sense of joy in accomplishments and efforts;

2) Time Urgency, which refers to a constant struggle with time, including impatience with delays and unproductive time; and 3) Anger/Hostility, which refers to easily aroused anger. Type B individuals are easy-going; they work at steady paces, seldom become impatient, are not easily frustrated, and are more relaxed.

Diamantopoulou (2001) conducted a study with a sample of bank employees in Greece to determine whether a relationship exists between personality (Types A and B) and Emotional Intelligence. Eighty participants were assessed on the ECI and a measure of Type A/B personality. Contrary to what was hypothesized, it was found that people with a mixture of both Type A and B were higher in Emotional Intelligence; furthermore, it was found that Type B was positively correlated with social skills competencies. Because Emotional Intelligence involves achievement orientation, initiative, influence, and leadership, it may be that those who are rated high in these competencies similarly have tendencies toward Type B personality. It may be that achieving a balance between Type A and B behaviors—rather than simply having tendencies toward one or the other—is associated with Emotional Intelligence. Although Type A is often characterized as the "negative" personality domain and Type B is seen as more "positive," it may be that in the workplace, Type A behaviors (e.g., feeling very responsible, careful about detail, competitive) may serve individuals well when balanced with Type B behaviors (e.g., patient, listens well, and rarely angry).

Myers-Briggs Type Indicator (MBTI) and ECI in Paramedics

To examine construct validity of the ECI, Burckle (2000b) conducted an analysis with 18 paramedics from an organization that provides medical care and transportation to the greater Denver/Boulder area. Participants ranged in age from 19–46; 15 were male and 3 were female. Multi-rater assessments (e.g., manager, peer, direct report) were obtained on the ECI and participants self-rated the MBTI Long Form (i.e., Form G).

The MBTI determines preferences on four scales: Introversion/Extraversion; Sensing/Intuiting; Thinking/Feeling; Judging/Perceiving (http://www.capt.org/The_MBTI_Instrument/Overview.cfm). The MBTI assigns people to one of sixteen different categories or types, based on their answers to 126 questions, such as, "How easy or difficult do you find it to present yourself, consistently, over a long period, as a person who is patient?"

Extraversion-Introversion (EI). The EI index is designed to reflect whether a person is an extravert or an introvert. Extraverts are oriented primarily toward the outer world; thus they tend to focus their perception and judgment on people and objects. Introverts are oriented primarily toward the inner world; thus they tend to focus their perception and judgment upon concepts and ideas.

Sensing-Intuition (SN). The SN index is designed to reflect a person's preference between two opposite ways of perceiving: one may rely primarily upon the process of sensing (S), which reports observable facts or happenings through one or more of the five senses; or one may rely upon the less-obvious process of intuition (N), which reports meanings, relationships, and/or possibilities that have been worked out beyond the reach of the conscious mind.

Thinking-Feeling (TF). The TF index is designed to reflect a person's preference between two contrasting ways of judgment. A person may rely primarily on thinking (T) to decide impersonally on the basis of logical consequences, or a person may rely on feelings (F) to decide primarily on the basis of personal or social values.

Judgment-Perception (JP). The JP index is designed to describe the process a person uses primarily in dealing with the outer world, that is, with the extraverted part of life. A person who prefers judgment (J) has reported a preference for using a judgment process (either thinking or feeling) for dealing with the

outer world. A person who prefers perception (P) has reported a preference for using a perceptive process (either S or N) for dealing with the outer world.

To create a continuum of data for each scale, participants' scores were given either a positive or negative value, depending on their scale preference. For example, someone who received a 24 on the Introvert/Extrovert scale, and was an *Introvert,* received a positive 24 for this scale. Conversely, a participant who received a 24 on the Introvert/Extrovert scale, and was an *Extrovert,* received a negative 24 to indicate his/her score was on the opposite side of the continuum. All Introversion, Sensing, Thinking, and Judging scores were given positive values, whereas Extraversion, Intuition, Feeling, and Perceiving were given negative values.

Pearson correlations were calculated to determine the relationship between the two instruments (see Table 15). Results indicated moderate to strong, significant correlations between several Emotional Intelligence competencies and the Sensing/Intuiting and Thinking/Feeling dimensions. Negative correlations indicate the relationship is in the Intuiting direction of the Sensing/Intuiting scale and the Feeling direction of the Thinking/Feeling scale.

The Myers-Briggs Intuitive types are strong on many of the EI competencies, particularly Empathy and Adaptability and competencies in the Social Awareness cluster. Similarly, the Myers-Briggs Feeling types correlated with many of the EI competencies, particularly Empathy and competencies in the Social Awareness cluster. Additionally, there were correlations between Feeling types and all of the competencies in the Social Skills cluster. These results provide good construct validity for the Emotional Competence Inventory.

Table 15: (Burckle, 2000b). Pearson correlations between ECI 1.0 competencies and Myers-Briggs dimensions with a sample of medical response paramedics (N=18).

ECI 1.0 Cluster	Competency	Introversion/ Extraversion	Sensing/ Intuiting	Thinking/ Feeling	Judging/ Perceiving
Self-Awareness	Emotional Self-Awareness	-.26	-.62**	-.57*	.05
	Accurate Self-Assessment	-.44	-.53*	-.64**	-.14
	Self-Confidence	-.40	-.16	-.21	-.03
Self-Management	Self-Control	.01	-.57*	-.40	.06
	Trustworthiness	-.29	-.38	-.35	.10
	Conscientiousness	-.08	-.01	-.20	.36
	Adaptability	-.29	-.66**	-.53*	.07
	Achievement Orientation	-.16	-.22	-.19	.14
	Initiative	-.31	-.40	-.47*	.01
Social Awareness	Empathy	-.17	-.68**	-.65**	.09
	Organizational Awareness	-.14	-.37	-.44	.21
	Service Orientation	-.23	-.40	-.50*	.11
Social Skills	Developing Others	-.32	-.46	-.57*	.11
	Leadership	-.33	-.33	-.56*	.04
	Influence	-.20	-.41	-.48*	.06
	Communication	-.24	-.52*	-.53*	-.01
	Change Catalyst	-.32	-.39	-.50*	-.04
	Conflict Management	-.23	-.45	-.45*	.18
	Building Bonds	-.36	-.51*	-.60**	-.06
	Teamwork & Collaboration	-.30	-.60**	-.61**	.06

*p < .05; ** p < .01

       0511-9889-HAYG

NEO Big Five Personality

Murensky (2000) sampled 90 executives (13 female and 77 male) from the 100 highest leadership positions in an international oil corporation. Executives completed self-assessment versions of the NEO Personality Inventory – Revised (NEO-PI-R), the Watson-Glaser Critical Thinking Appraisal (WGCTA – Form S) as a measure of cognitive ability, and the ECI.

The NEO-PI-R (Costa & McCrae, 1990) measures five personality domains. Neuroticism concerns emotional instability or maladjustment. It's a general tendency to experience sadness, anger, fear, guilt, etc. and can interfere with the ability to adapt, control impulses, and cope with stress. Extroversion is the enjoyment of social situations, interacting with others, or attending large gatherings. Openness concerns awareness and sensitivity to inner feelings with a preference for variety and intellectual curiosity about the inner and outer worlds. Agreeableness relates to sympathy and helpfulness toward others with a belief that people are, in return, helpful. Agreeableness is in contrast to those who are disagreeable, antagonistic, egocentric, and skeptical of others' intentions. Conscientiousness concerns planning, organization, achievement striving, self-discipline, and competence.

Table 16 shows that extroversion was significantly correlated with all four ECI clusters such that those who scored high in extroversion also tended to score high on the ECI. Openness and conscientiousness also tended to correlate with ECI scores while neuroticism and agreeableness were not associated with emotional intelligence.

Table 16: Correlations (N=90) between self-ratings on four ECI clusters and self-reported NEO-PI domains (Murensky, 2000).

ECI 1.0 Cluster	Neuroticism	Extroversion	Openness	Agreeableness	Conscientious-ness
Self-Awareness	-.07	.47**	.28**	.00	.30**
Self-Management	-.20	.24*	.20	-.02	.33**
Social Awareness	-.10	.24*	.23*	.03	.21
Social Skills	-.11	.49**	.22*	.08	.39**

*p < .05; ** p < .01

Managerial Styles (Carulli & Com, 2003)

A group of accountants from the heads of finance at an International Broadcasting Organization participated in an Emotional Intelligence leadership development program. Participants went through a 3.5 day program—a version of the Mastering Emotional Intelligence (MEI) workshop—explained below. A one-day, follow-up workshop was conducted nine to 12 months later along with a reassessment of the ECI and MSI.

The Managerial Style Inventory (MSI) is a 68-item multirater survey (McBer and Company, 1980; Kelner, 1991) designed to assess six managerial styles: Coercive, Authoritative, Affiliative, Democratic, Pacesetting, and Coaching. The styles were clinically derived (Kelner, 1991). The MSI has shown high levels of test-retest reliability (McBer and Company, 1980), high levels of internal consistency (Bakhtari, 1995), and construct and criterion validity (McClelland & Burnham, 1976; Chusmir, Koberg & Mills, 1989).

A Coercive managerial style demands immediate compliance, controls tightly, and gives corrective negative feedback. An Authoritative style gives long-term direction and vision, accepts input, and gives

balanced feedback. An Affiliative style promotes harmony, considers people's feelings as strongly as the task, and gives inconsistent or exclusively positive feedback unrelated to performance. A Democratic style works for collaborative commitment, empowers others to act, and gives feedback for adequate performance and fails to clearly differentiate levels of performance. Pacesetting managers work to their own high standards, ignore or micro control others depending on the assessed quality of employee, and give little feedback. Finally, a Coaching managerial style encourages the long-term development of others, empowers others to learn and develop, and gives feedback on performance for improvement.

Table 17 presents correlations between ECI competency and managerial style total others ratings. Coaching and Affiliative styles show strong relationships with EI. Other patterns emerged, which suggest a series of potential relationships between EI and managerial styles.

Table 17: Time 1 Emotional Intelligence and Managerial Style total others ratings (N=25) for Time 1 assessments (International Broadcasting Organization).

ECI 1.0 Cluster	Competency	Managerial Styles (MSI)					
		Coercive	Authoritative	Affiliative	Democratic	Pacesetting	Coaching
Self-Awareness	Emotional Self-Awareness	-.08	.19	.52**	.37†	.04	.40*
	Accurate Self-Assessment	-.08	.15	.30	.23	-.07	.29
	Self-Confidence	-.06	.11	.11	.02	-.13	.00
Self-Management	Self-Control	-.30	.25	.21	.28	-.13	.01
	Trustworthiness	.13	.26	.31	.31	-.09	.27
	Conscientiousness	.09	.28	.11	.13	-.15	.41*
	Adaptability	-.26	.38†	.44*	.38*	-.08	.32*
	Achievement Orientation	-.14	.21	.13	.06	.05	.27
	Initiative	-.14	.28	.43*	.41*	-.12	.47*
Social Awareness	Empathy	-.05	.29	.55**	.34†	-.08	.44*
	Organizational Awareness	-.31	.22	.29	.08	-.07	.17
	Service Orientation	-.02	.25	.56**	.30	-.20	.51*
Social Skills	Developing Others	-.01	.37†	.59**	.32	-.23*	.53**
	Leadership	-.14	.31	.44*	.23	-.21*	.47*
	Influence	-.15	.20	.50*	.28	-.14	.34†
	Communication	-.00	.17	.40*	.21	-.13	.36†
	Change Catalyst	-.00	.31	.51**	.18	-.07	.43**
	Conflict Management	.03	.29	.43*	.28	-.14	.39*
	Building Bonds	-.06	.06	.42*	.19	-.24*	.40*
	Teamwork & Collaboration	-.20	.49*	.75**	.52**	-.19	.52**

†$\underline{p}$ < .10; *$\underline{p}$ < .05; ** $\underline{p}$ < .01

Emotional Intelligence Gap Scores and Managerial Styles

Further analyses were conducted with ECI Time 1 scores and Managerial Style ratings. A "gap" score was computed for each participant by subtracting their total others scores from their self scores. This is considered a measure of ECI self-inflation: the higher the gap score, the higher the participants rated themselves in comparison to how they were rated by others.

Table 18 presents correlations between ECI gap scores and Managerial Style ratings. The participants who were higher in self-inflation of ECI scores tended to have lower Authoritative Style ratings. Moderate findings emerged for the Affiliative Style: participants with higher self-inflation scores were lower in Affiliative Style. Other styles failed to correlate with ECI gap scores. Interestingly, the participants with high gap scores (i.e., self-inflated) tended to be *higher* in Pacesetting and *lower* in Coaching. This is evidence for the importance of self-awareness (or at least a knowledge of how others

 0511-9889-HAYG

see you) because those without it are more likely to use a Pacesetting style and less likely to use Coaching—which have been shown to negatively impact workplace outcomes.

Table 18: Emotional Intelligence and Managerial Style correlations (N=25) for Time 1 assessments. ECI gap scores and total others' ratings of Managerial Style for Time 1 assessments. Gap score corresponds to the difference between how participants rated themselves on the ECI versus how they were rated by others (Self minus Total Others): the higher the gap score, the greater the self inflation (International Broadcasting Organization).

ECI 1.0 Cluster	Competency Gap Score	Managerial Styles (MSI)					
		Coercive	Authori-tative	Affiliative	Demo-cratic	Pace setting	Coaching
Self-Aware-ness	Emotional Self-Awareness	.10	.02	-.11	.12	.00	.06
	Accurate Self-Assessment	.03	-.54**	-.45*	-.22	.48*	-.40*
	Self-Confidence	.19	-.27	-.13	-.06	-.02	.07
Self-Manage-ment	Self-Control	.26	-.32	-.30	-.10	.11	-.17
	Trustworthiness	.07	-.32	-.03	-.03	.03	.07
	Conscientiousness	-.18	-.11	.07	.15	.13	-.15
	Adaptability	.08	-.33	-.10	.15	.15	-.17
	Achievement Orientation	.21	-.22	-.06	.16	-.17	.15
	Initiative	.14	-.56**	-.43*	-.28	.16	-.21
Social Aware-ness	Empathy	-.01	-.14	-.03	.16	.06	.04
	Organizational Awareness	.22	-.18	-.21	.09	.11	-.14
	Service Orientation	.10	-.36†	-.27	.11	.22	-.18
Social Skills	Developing Others	-.07	-.14	-.09	.15	.12	-.03
	Leadership	.01	-.27	-.29	-.10	.11	-.23
	Influence	.29	-.36†	-.31	-.27	.05	-.09
	Communication	.00	-.36†	-.11	.01	.11	-.08
	Change Catalyst	-.03	-.49*	-.30	-.19	.25	-.28
	Conflict Management	.04	-.28	-.08	.17	-.02	.02
	Building Bonds	.09	-.34†	-.27	.07	.17	-.11
	Teamwork & Collaboration	.23	-.45*	-.47*	-.18	.18	-.21

†$\underline{p}$ < .10; *$\underline{p}$ < .05; ** $\underline{p}$ < .01

Emotional Intelligence Change Scores and Managerial Styles

Further analyses were conducted with the data collected from the heads of finance at the International Broadcasting Organization who participated in an Emotional Intelligence leadership development program. Because participants were assessed twice on the ECI, an improvement or "change" score was calculated. This simply was calculated by subtracting participants' Time 1 assessments from their Time 2 ratings: the higher the ECI change score, the greater the improvement or increase in Time 2 scores.

Account managers who scored higher upon reassessment on the ECI (higher change scores) when rated by others were rated as less Coercive and more Pacesetting (see Table 19). ECI change scores were not associated with the other managerial styles. Results with a Coercive style are consistent with what we would expect; highly Coercive leaders may tend to blame or put responsibility on others, and thus be unlikely to take feedback seriously. Those with greater ECI change or improvement would tend to have lower Coercive scores (which would likely lead to better workplace outcomes). The Pacesetting findings are harder to explain. If Pacesetting is based on nACH or taking personal accountability/responsibility for outcomes , then Pacesetters would be likely to pay attention to feedback (ECI time 1) and make changes in their behavior, resulting in bigger change scores. Pacesetting, like a Coercive style, can be necessary and lead to positive outcomes; further information and research is needed to fully understand the relationship among these variables in this organizational context.

Table 19: Emotional Intelligence and Managerial Style correlations (N=25). ECI Change scores and total others' ratings of Managerial Style. Change scores correspond to the change in ECI ratings for Time 2 assessments: the higher the ECI change score, the greater the improvement or increase in Time 2 scores (International Broadcasting Organization).

ECI 1.0 Cluster	Competency Change Scores	Managerial Styles (MSI)					
		Coercive	Authori-tative	Affiliative	Demo-cratic	Pace-setting	Coaching
Self-Aware-ness	Emotional Self-Awareness	-.48*	.01	-.27	-.09	.65**	-.27
	Accurate Self-Assessment	-.41†	.11	-.11	.11	.52*	-.15
	Self-Confidence	-.26	.43*	.33	.17	.29	.17
Self-Manage-ment	Self-Control	-.15	.20	.18	.13	-.04	-.15
	Trustworthiness	-.44*	.32	-.35	.00	.28	.05
	Conscientiousness	-.28	.23	.34	.10	.16	-.03
	Adaptability	-.40†	.04	-.17	-.08	.30	-.30
	Achievement Orientation	-.41†	.19	-.10	.09	.63**	-.12
	Initiative	-.26	.31	.15	.01	.26	-.12
Social Aware-ness	Empathy	-.30	.35	.10	.25	.24	.02
	Organizational Awareness	-.49*	.19	-.08	.10	.46*	-.07
	Service Orientation	-.19	.50*	.12	.23	.33	.09
Social Skills	Developing Others	-.16	.16	.10	.16	.32	-.00
	Leadership	-.20	.21	-.04	.03	.56**	.01
	Influence	-.51*	.24	-.06	.01	.59**	-.14
	Communication	-.30	.39†	-.02	.11	.60**	.04
	Change Catalyst	-.24	.20	-.05	-.12	.48*	-.07
	Conflict Management	-.53*	.34	-.04	.21	.44*	-.16
	Building Bonds	-.29	.23	-.42	.34	.34	-.01
	Teamwork & Collaboration	.03	.10	-.21	-.04	.43*	-.07

†$p < .10$; *$p < .05$; ** $p < .01$

Organizational Climate

The Organizational Climate Survey (OCS) is a 47-item multi-rater survey (Hay/McBer, 1995) designed to assess six climate dimensions: Flexibility, Responsibility, Standards, Rewards, Clarity, and Team Commitment. The OCS is based on the theoretical framework outlined by Litwin and Stringer (1968) in their seminal study of organizational climate. Organizational climate is the perception of how it feels to work in a particular environment. It encompasses the norms, values, expectations, policies, and procedures of a work environment (Hay/McBer, 1995). The climate dimensions have been factor analytically confirmed and have shown to have high levels of internal consistency (Sala, 2001). The OCS has also demonstrated criterion validity (Becklean & Kinkead, 1968; McClelland & Burnham, 1976; Leshner, Baker, Larrere et al., 1994) in a variety of organizations from several industries.

Flexibility refers to the feeling employees have about constraints in their workplace—the degree to which they feel there are no unnecessary rules, procedures, policies, and practices that interfere with task accomplishment, and that new ideas are easy to get accepted. Responsibility is the feeling that employees have authority—the degree to which they can do their jobs autonomously and are accountable for the outcome. Standards refers to the emphasis that management puts on improving performance and doing one's best—including the degree to which people feel challenging and attainable goals are set for the organization and its employees. Rewards concern the degree to which employees feel that they are being recognized and rewarded for good work, and that such recognition is directly and differentially related to levels of performance. Clarity concerns the feeling that everyone knows what is expected of them and that they understand how those expectations relate to the larger goals and objectives of the organization. And

finally, Team Commitment refers to the feeling that people are proud to belong to the organization, that they will provide extra effort when needed and will trust that everyone is working toward a common objective.

U.K. College Principals Study (Sala, 2003) and Organizational Climate

A study with a sample of 92 Further Education college principals was conducted to explore the relationships among Emotional Intelligence, Managerial Style, Organizational Climate, and several measures of college/student performance (e.g., retention rate, student academic achievement). While considering the influence of various background factors (e.g., size of college, student funding, years of experience), several significant relationships emerged demonstrating a significant association between principals' Emotional Intelligence and managerial behaviors with measures of college/student performance.

Pearson correlations between U.K. Principals' ECI and Organizational Climate scores (total others ratings) revealed significant relationships (see Table 20). ECI competencies and clusters were strongly associated with all six climate dimensions. Effect sizes were small, moderate, and large—all were statistically significant due to sample size (N=92).

Because of a concern for potential common-source bias, a multiple regression was performed to better understand the relationship between EI and climate. Results from the multiple regression analysis show that 57% of the variance in climate could be explained by Principals' Emotional Intelligence competency scores (see Table 21). Examination of the beta weights shows that the ECI Social Skills cluster carries the majority of that effect.

Table 20: U.K. Principal's (Sala, 2003) Emotional Intelligence and Organizational Climate correlations (N=92).

ECI 1.0 Cluster	Competency	Organizational Climate (OCS)						
		Flexibility	Responsi-bility	Standards	Rewards	Clarity	Team Commit-ment	Total Climate Score
Self-Aware-ness	Emotional Self-Awareness	.53	.46	.23	.61	.34	.35	.53
	Accurate Self-Assessment	.63	.59	.45	.73	.47	.42	.70
	Self-Confidence	.38	.38	.33	.50	.50	.34	.53
Self-Manage-ment	Self-Control	.50	.41	.17	.57	.32	.28	.49
	Trustworthiness	.35	.27	.28	.57	.38	.37	.45
	Conscientiousness	.39	.29	.44	.55	.60	.39	.56
	Adaptability	.61	.55	.31	.57	.42	.32	.57
	Achievement Orientation	.50	.40	.62	.58	.57	.37	.63
	Initiative	.52	.58	.42	.55	.44	.32	.60
Social Aware-ness	Empathy	.60	.48	.21	.67	.42	.29	.57
	Organizational Awareness	.47	.35	.32	.51	.58	.30	.53
	Service Orientation	.58	.46	.28	.66	.48	.33	.59
Social Skills	Developing Others	.55	.50	.51	.77	.58	.44	.72
	Leadership	.52	.48	.47	.65	.59	.42	.66
	Influence	.53	.57	.38	.59	.47	.37	.61
	Communication	.57	.50	.30	.65	.43	.35	.59
	Change Catalyst	.55	.50	.59	.64	.59	.43	.69
	Conflict Management	.57	.49	.31	.71	.49	.47	.66
	Building Bonds	.55	.54	.24	.64	.43	.33	.59
	Teamwork & Collaboration	.62	.61	.41	.78	.62	.51	.76
ECI Cluster	Self-Awareness	.60	.56	.41	.72	.53	.44	.70
	Self-Management	.62	.55	.50	.72	.59	.43	.72
	Social Awareness	.63	.50	.29	.71	.54	.34	.64
	Social Skills	.63	.59	.46	.77	.60	.47	.75

Note: All correlations significant (p < .001)

Table 21: U.K. Principal's (Sala, 2003) Emotional Intelligence cluster scores and total Organizational Climate scores (N=92). Summary of Multiple Regression analysis for all ECI cluster dimensions predicting total Organizational Climate.

Model 1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Self-Awareness	-2.00	4.45	-.09	-.45	.65
Self-Management	-3.31	2.35	.24	1.41	.16
Social Awareness	-2.08	2.38	-.13	-.88	.38
Social Skills	4.88	1.80	.73	2.72	.01

Note: Dependent Variable = Total Climate
* Correlation is significant (p < .01)
R-squared = .57, Adjusted R-squared = .56

Construct Validity Using ECI 2.0

ECI 2.0 and Organizational Climate

Data on management styles and climate was collected within a Hay office and represents a wide range of roles (e.g., administrative, staff, consultants, managers). Sixteen participants were male (36%) and 29 were female (64%). Results (see Table 22) suggest that competencies may not lead directly to better climate—which is mostly determined by Managerial Styles. These findings are consistent with Hay's model whereby emotional intelligence leads to managerial styles, which in turn influences organizational climate.

Of all Climate dimensions, Flexibility was consistently related to nearly all ECI 2.0 competencies. It was found that those with higher EI competencies create greater levels of Flexibility. These results provide further construct validity: Inspirational Leadership was the only ECI competency that was consistently related to all Climate dimensions.

Table 22: ECI 2.0 and Organizational Climate correlations with an international consulting organization (N=21).

ECI 2.0 Cluster	Competency	Organizational Climate (OCS)						
		Flexi-bility	Responsi-bility	Standards	Rewards	Clarity	Team Commit-ment	Total Climate Score
Self-Awareness	Emotional Self-Awareness	.61**	.44*	.08	.20	.04	.06	.27
	Accurate Self-Assessment	.26	.27	.15	.46*	.01	.19	.28
	Self-Confidence	.51*	.37	.20	.38†	.18	.26	.37†
Self-Manage-ment	Emotional Self-Control	.03	.20	.16	.00	.01	.01	.05
	Transparency	.39†	.22	.01	.14	.01	.06	.06
	Adaptability	.47*	.27	.02	.35	.02	.10	.18
	Achievement	.45*	.29	.04	.25	.04	.03	.17
	Initiative	.37†	.29	.03	.19	.08	.01	.07
	Optimism	.21	.06	.03	.10	.04	.04	.01
Social Awareness	Empathy	.44*	.26	.02	.18	.08	.03	.13
	Organizational Awareness	.52*	.19	.01	.12	.17	.06	.16
	Service Orientation	.32	.10	.00	.31	.06	.13	.13
Relation-ship Manage-ment	Developing Others	.10	.19	.18	.11	.14	.04	.10
	Inspirational Leadership	.59**	.35	.42†	.59**	.21	.37†	.51*
	Change Catalyst	.55**	.34	.14	.29	.18	.26	.32
	Influence	.34	.01	.12	.28	.16	.13	.18
	Conflict Management	.52*	.24	.12	.34	.13	.27	.35
	Teamwork & Collaboration	.38†	.15	.03	.35	.04	.09	.15

†p < .10; *p < .05; ** p < .01

0511-9889-HAYG

ECI 2.0 and Irrational Beliefs

According to Albert Ellis' theory of Rational-Emotive Behavior Therapy, irrational beliefs (IB) lead to maladaptive emotions. A central component of irrationality is the denial of one's own possibilities to control important aspects of life. A specific IB is that one cannot control and thus cannot avoid certain emotion states. Emotion research considers regulative emotion control a pivotal component of the concept of "emotional intelligence" (EI). A negative association between IB and EI can thus be theoretically derived from both concepts. Furthermore both should be related to life satisfaction. Welpe, Tumasjan, et al. (2005) examined the relationship between IB and EI using standardized questionnaire instruments and the predictive value of both concepts regarding life satisfaction. Using a sample of 136 (94 female, 42 male) they found a significant negative correlation between emotional intelligence and irrational beliefs (r = -.21).

Leader EI, Emotionally Competent Group Norms, and Performance of Military Air Crews.

Stubbs (2005) examined the relationship between a team leader's emotional intelligence and the development of emotionally competent group norms (ECGN). She also examined the relation between ECGN and group performance. Druskat and Wolff (2001) developed a theory of emotional intelligence at the group level. Stubbs hypothesized that the individual emotional intelligence of the team leader would influence the development of emotional intelligence at the group level, which according to Druskat and Wolff (2001) consists of a set of emotionally competent group norms that have a positive impact on the experience and display of emotion in the group.

Stubbs (2005) studied 422 people in 81 teams in a military organization. The results, using structural equation modeling, show that team leader emotional intelligence is significantly related to the presence of emotionally competent group norms in the teams they lead, and that emotionally competent group norms are related to team performance. Team leader emotional intelligence was also found to have a direct effect on team performance.

ECI 2.0 and Follower Commitment

Burrs (2004) conducted a study of 83 mid-level managers from the electronic publishing industry to examine the relation between emotional competence, measured with the ECI 2.0, and follower commitment, measured with a custom-designed instrument (PQi). She found a significant correlation between overall total others' ratings and follower commitment (r = .849, p< .001) as well as the self rating and follower commitment (r = .224, p < .05). She also found that there was no difference in ratings of emotional competence based on length of time a subordinate knew his or her manager (mean length of time manager was known = 2.34 years).

Discriminant Validity Using ECI 1.0

Analytical Thinking and Emotional Intelligence

Murensky (2000) sampled 90 executives (13 female and 77 male) from the 100 highest leadership positions in an international oil corporation. Executives completed a self-assessment of the Watson-Glaser Critical Thinking Appraisal (WGCTA – Form S) as a measure of cognitive ability, and a self-assessment of the ECI.

The Watson-Glaser (Watson & Glaser, 1994) is a widely used measure of critical thinking ability and analytical reasoning. The measure provides a reliable composite score on five subsets: inference (discriminating among degrees of truth or falsity from given data); recognition of assumptions (recognizing unstated assumptions or presuppositions in given statements); deductions (determining

whether certain conclusions can be drawn from given information); interpretation (deciding if generalizations or conclusions can be drawn from given data); and evaluation of argument (distinguishing strong from weak argument for a particular question or issue).

Murensky (2000) found that overall, most ECI competencies were not correlated with critical thinking ability, and that the two are independent constructs tapping different dispositions (see Table 23). She argued that the findings supported Goleman's claim regarding the independence of these two types of intelligence. The significant, negative correlations with the Watson-Glaser and three competencies within the social skills cluster suggest that leaders who are particularly effective in critical thinking may be less effective in reading and orchestrating influence situations (Murensky, 2000). Results of this study provide good evidence for the discriminant validity of the ECI.

Table 23: Pearson correlations (N=90) between Watson-Glaser Critical Thinking and Analytical Reasoning scores and ECI competency scores (Murensky, 2000).

ECI 1.0 Cluster	Competency	Watson-Glaser
Self-Awareness	Emotional Self-Awareness	.04
	Accurate Self-Assessment	-.07
	Self-Confidence	-.13
Self-Management	Self-Control	-.13
	Trustworthiness	-.09
	Conscientiousness	-.15
	Adaptability	-.08
	Achievement Orientation	.05
	Initiative	-.12
Social Awareness	Empathy	-.08
	Organizational Awareness	-.07
	Service Orientation	-.20
Social Skills	Developing Others	-.23*
	Leadership	-.21*
	Influence	-.14
	Communication	-.13
	Change Catalyst	-.07
	Conflict Management	-.14
	Building Bonds	-.24*
	Teamwork & Collaboration	-.19

*p < .05

Discriminant Validity Using ECI 2.0

Personality and Emotional Intelligence

Zadel (2004) conducted a study of 40 managers with 154 raters using the ECI 2.0. He examined the relation between personality measured with the Eysenck's Personality Questionnaire (EPQ) and emotional intelligence using the ECI 2.0. Personality dimensions and emotional intelligence are theoretically seen as orthogonal dimensions, thus, he did not expect to find significant correlations among the constructs in the two instruments. His findings show that there is no relation between personality traits and emotional intelligence.

 0511-9889-HAYG

Convergent Validity Using ECI 2.0

German Translation of ECI 2.0 vs. Wong and Law Instrument

Tumasjan et al. (2005) performed a study to validate a German translation of the ECI 2.0. They combined the results of two studies to provide a total sample size of 236. They also measured emotional intelligence with the Wong & Law scale (2002) to provide an indication of convergent validity. Overall, they found the German version of the ECI 2.0 to be useful and reliable. Overall Cronbach's alpha reliability was .90. The reliabilities of the individual competencies and clusters was lower and is reported in Table 24. The authors found that 43 of the 72 items correlated less highly with its subscale than one of the other three. Overall, the ECI 2.0 correlated highly (r=.41, p<.001) with the Wong & Law instrument (2002), indicating a moderate degree of convergent validity; however, the correlations of the subscales were weak (between r=.13 and .34). The authors explain the weak correlations of the subscales as being related to different conceptualizations of emotional intelligence.

Table 24: Reliability of the ECI 2.0

ECI 2.0 Cluster (Alpha of German Sample)	Competency	Alpha (reported in 2002 version of this technical manual)	Alpha of German Sample
Self-Awareness (.62)	Emotional Self-Awareness	.69	.55
	Accurate Self-Assessment	.57	.40
	Self-Confidence	.71	.66
Self-Management (.76)	Emotional Self-Control	.66	.57
	Transparency	.53	.40
	Adaptability	.55	.56
	Achievement	.59	.44
	Initiative	.59	.45
	Optimism	.70	.44
Social Awareness (.68)	Empathy	.66	.49
	Organizational Awareness	.77	.57
	Service Orientation	.70	.70
Relationship Management (.81)	Developing Others	.78	.54
	Inspirational Leadership	.74	.74
	Change Catalyst	.75	.66
	Influence	.66	.53
	Conflict Management	.39	.29
	Teamwork & Collaboration	.61	.44

Emotional Intelligence Training and Development Using ECI 1.0

The recent and widespread interest in the importance of emotional intelligence at work has led to the development of programs that are designed to increase EI skills and competencies (Sala, 2001). A sample of Brazilian managers and a sample of U.S. accountants participated in a Mastering Emotional Intelligence (MEI) workshop. Pre- and post-workshop assessments were obtained on the ECI.

In general, for the Brazilian Managers sample, scores were higher upon reassessment, suggesting that EI improved. Time 2 (T2) scores ranged from .02 standard deviations (SDs) to .75 SDs higher than Time 1 (T1) scores (see Table 25). On average, T2 scores were .33 SDs higher than T1 scores, which corresponds to approximately an 11% improvement over T1. Participants showed significant improvement on T2 ratings on the following eight out of 20 EI competencies: Self-Confidence, Organizational Awareness, Service Orientation, Conscientiousness, Adaptability, Initiative,

Communication, and Conflict Management. Two others (Empathy and Change Catalyst) showed marginal levels of improvement (see Table 25).

Results with the U.S. accounting organization were even more robust and promising than those found with the Brazilian sample. Scores were significantly higher upon reassessment on 19 of 20 competencies (see Table 26). Alternatively, T2 scores ranged from .28 SD units to 1.06 SD units higher than T1 scores. On average, T2 scores were .70 SD units higher than T1 scores, which corresponds to approximately a 24% improvement over T1.

Increases in T2 ECI scores with both samples suggest that workshop interventions are effective at improving EI. However, it is important to underscore that these findings, although very promising, are preliminary. Without an adequate control group it is difficult to isolate the impact of the intervention versus that of other variables that may have contributed to the higher scores. For example, Goleman (1998) reported research demonstrating a positive correlation between EI and age.

Table 25: Brazilian Managers: Overall differences between assessment one and assessment two on participants' total others scores (N=20).

ECI 1.0 Cluster	Competency	Assessment				Effect Size	t	p
		T1		T2				
		Mean	SD	Mean	SD			
Self-Awareness	Emotional Self-Awareness	2.55	.34	2.62	.31	.22	-1.05	.31
	Accurate Self-Assessment	3.42	.32	3.41	.28	.03	0.08	.94
	Self-Confidence	4.21	.38	4.42	.35	.58	-3.24	.004*
Self-Manage-ment	Self-Control	2.47	.31	2.52	.37	.15	-0.65	.52
	Trustworthiness	2.66	.23	2.69	.21	.14	-0.88	.39
	Conscientiousness	2.78	.26	2.90	.16	.57	-4.19	.001*
	Adaptability	3.18	.23	3.32	.22	.62	-2.96	.008*
	Achievement Orientation	4.58	.65	4.73	.56	.25	-1.23	.23
	Initiative	3.25	.32	3.42	.26	.59	-2.36	.03*
Social Awareness	Empathy	4.62	.70	4.80	.58	.28	-1.46	.16
	Organizational Awareness	3.58	.31	3.70	.29	.40	-2.79	.01*
	Service Orientation	4.21	.27	4.42	.29	.75	-3.07	.006*
Social Skills	Developing Others	3.17	.40	3.18	.46	.02	-0.15	.89
	Leadership	3.20	.46	3.27	.39	.17	-0.83	.42
	Influence	3.88	.37	3.98	.32	.29	-1.02	.32
	Communication	3.19	.35	3.35	.33	.47	-2.24	.04*
	Change Catalyst	3.85	.45	4.00	.53	.31	-1.73	.10
	Conflict Management	3.06	.35	3.23	.35	.49	-1.91	.07*
	Building Bonds	3.46	.36	3.50	.36	.11	-0.73	.47
	Teamwork & Collaboration	4.06	.54	4.10	.51	.08	-0.37	.72

*Differences were considered meaningful, or significant, if effect sizes were moderate or large and if paired-samples t-tests statistically significant (p < .05).

Table 26: U.S. Accounting Organization: Overall differences between assessment one and assessment two on participants' total others scores (N=19).

ECI 1.0 Cluster	Competency	Assessment				Effect Size	t	p
		T1		T2				
		Mean	SD	Mean	SD			
Self-Awareness	Emotional Self-Awareness	2.75	.28	2.87	.18	.55	-2.80	.01*
	Accurate Self-Assessment	3.72	.33	3.94	.11	1.01	-3.30	.004*
	Self-Confidence	4.43	.46	4.70	.31	.69	-3.22	.005*
Self-Management	Self-Control	2.77	.36	2.90	.15	.50	-2.05	.05*
	Trustworthiness	2.81	.20	2.92	.01	1.06	-2.74	.01*
	Conscientiousness	2.92	.18	2.96	.12	.28	-1.19	.24
	Adaptability	3.45	.42	3.71	.27	.75	-2.84	.01*
	Achievement Orientation	5.21	.60	5.52	.42	.60	-3.43	.003*
	Initiative	3.61	.39	3.78	.24	.55	-2.24	.04*
Social Awareness	Empathy	5.16	.73	5.58	.40	.75	-3.81	.001*
	Organizational Awareness	3.79	.30	3.92	.12	.60	-2.27	.04*
	Service Orientation	4.65	.44	4.83	.25	.54	-2.52	.02*
Social Skills	Developing Others	3.57	.48	3.84	.22	.77	-3.46	.003
	Leadership	3.52	.48	3.84	.20	.97	-4.45	.001*
	Influence	3.32	.56	3.61	.35	.63	-2.28	.04*
	Communication	3.60	.43	3.81	.21	.65	-2.46	.02*
	Change Catalyst	4.39	.50	4.65	.27	.67	-2.86	.01*
	Conflict Management	3.59	.42	3.82	.21	.70	-3.33	.004*
	Building Bonds	3.65	.38	3.89	.18	.87	-3.35	.004*
	Teamwork & Collaboration	4.46	.48	4.80	.28	.89	-4.32	.001*

*Differences were considered meaningful, or significant, if effect sizes were moderate or large and if paired-samples t-tests statistically significant (p < .05).

Stress and Emotional Intelligence

This research was based on a meditation class offered to employees and managers of all levels at a large U.S.-based apparel manufacturer. The focus of this project was to study the effects of mindfulness meditation on individual work effectiveness. Jolly (2001) hypothesized that participants who complied with the meditation program would significantly reduce their stress and increase their empathy and self-awareness when compared with a control sample. The experimental participants took an eight-week mindfulness meditation class. The research design provided for pre- and post-tests to both groups to measure any changes resulting from the intervention.

Results showed that participants who complied with the program significantly increased their self-reported empathy and self-awareness scores and significantly reduced stress as compared with the control sample. While both groups showed positive mean changes, the mean change for the experimental group was more than three times larger than the mean change for the control group. All statistically significant findings were based on self-reported ECI ratings; no significant findings emerged from ratings by others (Jolly, 2001).

Although this study does not provide evidence of the efficacy of specific training in emotional intelligence, it does provide some evidence for the development of emotional intelligence. This study also provides some evidence for construct validity by showing that emotional intelligence may be associated with reduced stress. These results further underscore the need for control groups in studies that attempt to evaluate the efficacy of training interventions designed to increase EI because the results demonstrate that people can develop these skills by engaging in a variety of activities. Other activities that might lead to increased EI scores include counseling, therapy, diversity or multicultural sensitivity training, spiritual education/training, etc.

Feedback: Self/Total Others Discrepancy Using ECI 1.0

Practitioners and organizational consultants, based on their experiences with clients, firmly believe that multi-rater or 360-degree feedback systems enhance self-knowledge and consequently improve managerial behavior (Hazucha, Hezlett & Schneider, 1993; London & Beatty, 1993). Scholarly research has confirmed these sentiments and found that higher levels of congruence between managerial "self" and "total others" behavioral ratings is associated with managerial effectiveness and performance (Atwater & Yammarino, 1992; Van Velsor, Taylor & Leslie, 1993; Church, 1997). It is also widely believed that this self/total other discrepancy is greater for those who are higher-level managers, although empirical studies have failed to validate this observation (Church, 1997).

The research reported here explores the relationship between self/total others discrepancy and job level with a measure of emotional intelligence. It is hypothesized that self/total others discrepancy scores will be higher for those individuals who have higher-level jobs. Although one might assume that higher-level (i.e., more successful) managers ought to possess a better understanding of themselves, it is also possible that as managers move up within an organization, there are fewer "sounding boards" that provide opportunities to get feedback from others. Therefore, because of this, higher-level managers may have less opportunity to calibrate their self-perceptions against those of others.

Job Level

Embedded within a demographic survey, participants reported their job level (see Table 27). Participants responded to a six-point scale: 1 = "entry-level individual contributor" and 6 = "senior-level manager." Participants' job level yielded a value of 1 through 6. Based on participants' response, a "low" and "high" job level-rating was created; job levels 1–3 were considered "low" (N=159) and job levels 4–6 were considered "high" (N=628).

Table 27: Job Level Frequency

Job Level	Description	Frequency	Percent
1	Entry-level Individual Contributor	22	1.8
2	Mid-level Individual Contributor	82	6.8
3	Senior-level Individual Contributor	123	10.1
4	First-level Manager	164	13.5
5	Mid-level Manager	341	28.1
6	Senior-level Manager	482	39.7
Total		1,214	100%

Participants rated themselves on the ECI and were also rated by others (i.e., peers, managers, and direct reports). Average scores for each competency were computed and competency gap or discrepancy scores were calculated. Competency gap/discrepancy scores were participants' self score minus their total others score. A positive gap score indicates that participants rated themselves higher than did others on a particular competency. If the gap score is negative, participants tended to rate themselves lower than did others.

An ANOVA was computed to test for differences between high- and low-level participants on all 20 competencies and EI clusters. Competency gap scores are significantly higher for high-level participants than for lower-level participants on 19 of 20 competencies (all except Organizational Awareness), confirming the hypothesized relationship between job level and self/total other discrepancy. Mean scores for high- and low-level participants reveal some interesting patterns. Nearly all competency gap scores for high-level participants are positive. This suggests that high-level participants consistently rate themselves higher than others. The majority of competency gap scores for low-level participants are negative or around zero. This suggests that lower level participants are more likely to see themselves as

others see them. A gap score of zero indicates that, on average, there was no difference between how participants see themselves and how they are seen by others.

ECI Clusters
Effect size differences were additionally computed for competency gap cluster scores (see Table 28). Effect size equals the difference between the groups being compared, divided by the standard deviation of the combined groups. This is a direct measure of the size of the difference between the groups that is not influenced by sample size (Nickerson, 2000). The table below summarizes gap differences between low- and high-level participants. For example, the table below indicates that high-level participants overrated themselves on the Self-Awareness cluster by 15% more than lower-level participants did.

Table 28: Effect Size for ECI 1.0 Cluster Gap Scores

ECI 1.0 Cluster Gap Score	Low Level	High Level	Effect Size— % Difference
Self-Awareness	-.01	.29	+15%
Self-Management	-.01	.26	+13%
Social Awareness	-.02	.17	+08%
Social Skills	-.05	.21	+11%

In an attempt to better understand the relationship between job level and self/total other discrepancy, another ANOVA was computed to test for differences between high- and low-level participants on their self and total others ECI cluster scores. High-level participants rated themselves higher than low-level participants on all four ECI clusters. Alternatively, some evidence was found to suggest that low-level participants are rated higher by others than are high-level participants—in two of four EI clusters.

The results of this study demonstrate that higher-level employees are more likely than lower-level employees to have an inflated view of their emotional intelligence competencies and *less* congruence with the perceptions of others who work with them often and know them well. This information is valuable to our clients because previous research has firmly established that high-performing managers tend to have more accurate self-perceptions. That is, high-performing individuals' self-perceptions tend to match the perceptions/ratings of total others. Therefore, helping managers and executives better understand how they are perceived by others can have significant implications for performance improvement.

There are a couple of reasonable explanations for these findings. First, people who are in higher-level positions within an organization have fewer opportunities for feedback because there are literally fewer people above them who can provide such feedback. Second, it may be that people are less inclined to give constructive feedback to higher-status individuals in general, even when this information is specifically asked for by managers or executives. People may be reluctant to give candid feedback that is less than flattering.

Accurate Self-Assessment Study

Burckle (2000a) hypothesized that those who were rated low by others on the Accurate Self-Assessment subscale of the ECI are less aware of their strengths and limits than those who were rated high on this competency. With a sample of 427 individuals from a variety of organizations, participants were catego-rized as either high or low in Accurate Self-Assessment based on their total others scores. Those who scored in the top 25 percent were considered high in Accurate Self-Assessment whereas those who scored in the bottom 25 percent were categorized as low. To determine discrepancies between self- and total others assessments, differences between total others and self scores for each competency were computed.

Results showed that those who were low in Accurate Self-Assessment showed a significantly larger mean gap between self and total others scores on each competency as compared to those who were high in this competency. A secondary comparison was made to determine if participants rated themselves higher or lower than others rated them by subtracting total others from self competency scores. Based on the direction of the results (i.e., positive or negative) it was determined whether, on average, each group's assessments of themselves were higher or lower than total others' evaluations of them. Based on this calculation, it was found that, on average, those who were low in Accurate Self-Assessment rated themselves higher on every competency than others rated them. Conversely, those who were high in Accurate Self-Assessment underrated themselves.

As expected, those who are not very aware of their strengths and weaknesses have difficulty accurately evaluating themselves on Emotional Intelligence competencies. Specifically, it was found that those who score low on the Accurate Self-Assessment subscale of the ECI have significantly larger gaps between their views of themselves and others' views of them as compared to those who are high in this competency.

Burckle (2000a) concluded that those who are rated high in Accurate Self-Assessment have a more realistic view of themselves. Those who were rated high in Accurate Self-Assessment rated themselves slightly less emotionally intelligent than they were perceived, while those who were rated low in Accurate Self-Assessment tended to view themselves as more emotionally intelligent than others observed them to be.

Research on Demographic Variables Using ECI 1.0

Promotions

Within a demographic survey, participants reported promotions (participants self-reported the number of promotions they've received in the last five years). Although correlations were small, significant relationships were found between self-reported number of promotions and self-rated ECI scores (may be result of halo). No relationship was found between total others ECI ratings and participant self-reported number of promotions (confirms possible halo effect).

Emotional Intelligence and Age

Ratings on ECI clusters by both participants and total others were positively correlated with age; older participants rated themselves and were rated by total others higher in ECI competencies than younger participants. These results are consistent with previous research; also other research presented in this manual shows that particular life experiences are associated with higher ECI scores.

Interestingly, educational level is not related to ECI self-rating scores; however those that report higher levels of education are rated higher on the ECI by total others.

Emotional Intelligence and Job Characteristics

Participants with higher job levels (e.g., senior-level manager vs. entry-level manager) rated themselves higher on the ECI than those with lower job levels. No relationship was found between job level and total others-ratings on the ECI—although a significant (albeit small) correlation was found between job level and ECI social skills cluster (see Table 29).

Table 29: Correlations between self and total others ratings on four EI clusters and participants' self-reported level of education, job level, and number of direct reports.

ECI 1.0 Cluster	# of Promotions	Age	Level of Education	Job Level
Self-Awareness (Self)	r = .12** (N=546)	r = .15** (N=874)	r = .02 (N=885)	r = .17** (N=898)
Self-Management (Self)	r = .13** (N=546)	r = .19** (N=874)	r = .07 (N=885)	r = .25** (N=898)
Social Awareness (Self)	r = .08 (N=546)	r = .13** (N=874)	r = .04 (N=885)	r = .15* (N=898)
Social Skills (Self)	r = .12** (N=546)	r = .19** (N=874)	r = .04 (N=885)	r = .26** (N=898)
Self-Awareness (Total Others)	r = .01 (N=494)	r = .11** (N=764)	r = .11** (N=774)	r = -.02 (N=788)
Self-Management (Total Others)	r = -.01 (N=494)	r = .13** (N=764)	r = .17** (N=774)	r = .05 (N=788)
Social Awareness (Total Others)	r = -.06 (N=494)	r = .15** (N=764)	r = .09* (N=774)	r = -.01 (N=788)
Social Skills (Total Others)	r = .03 (N=494)	r = .17** (N=764)	r = .14** (N=774)	r = .13** (N=788)

* $p < .05$; ** $p < .01$

Gender and Emotional Intelligence

Gender differences were found on both self and others ratings on the ECI (see Table 30). Females rated themselves, and were rated by total others (males and females), higher on the ECI than males rated themselves or were rated by total others. The literature is mixed here; some have found no differences between men and women while others have found differences on particular competencies.

Cavallo and Brienza (2002) conducted a study with 358 managers across the Johnson & Johnson Consumer & Personal Care Group and found some gender differences. Using the ECI, females were rated higher than males by peers on: Emotional Self-Awareness, Conscientiousness, Developing Others, Service Orientation, and Communication. Females were rated higher than males only on Adaptability and Service Orientation by supervisors; and no differences were found between men and women by direct reports.

Although more data is needed for conclusive findings, it does seem that females tend to score higher than males on the ECI. More research is needed to determine whether this reflects true differences in emotional intelligence rather than an artifact of the assessment method (survey ratings may be biased by gender role expectations and assumptions).

Table 30: Data from the Hay EI database.[a] Differences between male and female self and total others ratings on four EI clusters.

ECI 1.0 Cluster	Males (N=1,015)		Females (N=496)		ANOVA
	M	SD	M	SD	F
Self-Awareness (Self)	5.50	.65	5.61	.64	11.44***
Self-Management (Self)	5.50	.61	5.50	.64	.00
Social Awareness (Self)	5.52	.71	5.60	.71	5.84**
Social Skills (Self)	5.31	.70	5.29	.74	.221
Self-Awareness (Total Others)	5.18	.56	5.43	.53	68.90***
Self-Management (Total Others)	5.22	.54	5.35	.53	21.50***
Social Awareness (Total Others)	5.30	.62	5.54	.57	48.60***
Social Skills (Total Others)	5.06	.62	5.22	.59	22.61***

Note: ** $p < .01$; *** $p < .001$
[a] On average, approximately 80% of this data were missing from the demographic surveys.

Research on Demographic Variables Using ECI 2.0

Age, Gender, Educational Level and Emotional Intelligence

Munchinda (2004) studied 196 employees in the Bank of Thailand. He translated the ECI 2.0 into Thai and found the instrument overall (Cronbach's alpha = .92) and the four subcategories (Cronbach's alpha ranged from .65 to .84) to have acceptable reliability. The individual competencies, however, did not show good reliability for the translated version (11 competencies had a Cronbach's alpha below .6 with the low being .36). Age was the only demographic characteristic found to positively correlate with overall self-ratings of emotional competency. The tests of the relationships between self rating of emotional intelligence and work Group, gender, and educational level showed no significant relationships.

Age, Gender, Ethnicity and Emotional Intelligence

Byrne (2003) reported the demographic correlations shown in Table 31 for a sample of 325 students in graduate programs at three universities. The ECI was measured with the self-score instrument. There is a significant positive correlation with age for all clusters and a significant correlation for self-management and social skills with gender. Males reported higher scores in both of these clusters. There were no correlations found between minority status and ECI

Table 31: Correlations Age & ECI 2.0 self score

ECI 2.0 Cluster	Gender F = 1 M = 2	AGE	Minority 1 = non-White/Caucasian 2 = White/Caucasian
Self-Awareness	-0.036	0.165**	-0.064
Self-Management	0.123*	0.218**	-0.060
Social Awareness	0.106	0.218**	-0.021
Relationship Management	0.134*	0.233**	-0.043

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

ECI 2.0 Descriptive Statistics

Descriptive Statistics for the ECI 2.0

The means and standard deviations for the ECI competencies are presented below (Table 32). The inter-competency correlations for average-item and scored data are shown in Table 33 and Table 34 respectively. Each participant was rated on average by 10.2 raters (SD=5.6) and results are based on 246,974 total ratings aggregated by participant. Of the 246,974 ratings, 21,365 (8.7%) were managers, 67,748 (27.4%) were direct reports, 69,139 (28%) were peers, 43,297 (17.5%) were "other", and 24,868 (10.1%) were clients. ECI self rating cases number 20,557 (8.3%) and ECI other-rating cases number 226,417 (91.7%).

For total others ratings, aggregate statistics for number of raters per participant:

- Mean = 10.2
- Standard Deviation = 5.6
- Median = 9.00 (9% of sample)
- Mode = 9.00 (21,989 cases)
- 97% of cases are rated by 1–22 raters
- 52% of cases are rated by 1 to 9 raters

Table 32: Norms and descriptive statistics for ECI 2.0 overall sample with complete database.

ECI 2.0 Cluster	Competency	Average-Item				Scored			
		Self (n=19997)		Tot. Oth. (n=21156)		Self (n=6372)		Tot. Oth. (n=6433)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Self-Awareness	Emotional Self-Awareness	4.10	.56	3.07	.70	3.03	.58	2.85	.41
	Accurate Self Assessment	3.87	.47	3.57	.49	2.88	.52	2.88	.45
	Self-Confidence	4.01	.60	4.15	.41	3.57	.45	3.71	.31
Self-Management	Emotional Self Control	3.60	.56	3.73	.47	2.79	.59	3.01	.46
	Transparency	4.11	.51	3.49	.52	3.17	.50	3.05	.38
	Adaptability	3.96	.49	3.69	.43	3.65	.38	3.69	.27
	Achievement	4.04	.49	3.69	.50	3.02	.51	2.99	.37
	Initiative	3.68	.52	3.27	.48	3.61	.40	3.64	.30
	Optimism	4.24	.49	3.93	.46	3.27	.48	3.23	.37
Social Awareness	Empathy	4.13	.50	3.89	.46	3.74	.35	3.67	.33
	Organizational Awareness	3.90	.62	3.62	.56	2.94	.57	3.04	.39
	Service Orientation	4.29	.50	3.98	.55	3.74	.36	3.75	.28
Relationship Management	Developing Others	4.01	.55	3.62	.58	3.00	.59	2.97	.45
	Inspirational Leadership	3.76	.66	3.66	.58	2.81	.61	2.91	.48
	Change Catalyst	3.83	.56	3.57	.51	2.84	.58	2.82	.40
	Influence	3.80	.59	3.50	.54	2.89	.58	2.97	.40
	Conflict Management	3.34	.57	2.92	.51	3.62	.39	3.67	.26
	Teamwork & Collaboration	4.12	.47	3.94	.43	3.11	.52	3.10	.40

Inter-Competency Correlations

Table 33: Inter-competency correlations for total others ratings, average-item data (n=21156).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	--																	
2	.71	--																
3	.52	.57	--																
4	.50	.46	.31	--															
5	.70	.61	.41	.57	--														
6	.50	.56	.48	.29	.37	--													
7	.64	.60	.61	.36	.50	.46	--												
8	.45	.58	.71	.25	.34	.48	.63	--											
9	.51	.46	.62	.45	.41	.37	.58	.54	--										
10	.31	.45	.47	.10	.21	.33	.39	.63	.19	--									
11	.69	.67	.53	.55	.65	.52	.62	.52	.55	.32	--								
12	.71	.68	.43	.59	.67	.46	.47	.33	.49	.15	.70	--							
13	.75	.71	.62	.42	.66	.54	.73	.61	.54	.39	.76	.66	--						
14	.50	.56	.39	.49	.47	.40	.42	.45	.42	.37	.62	.54	.49	--					
15	.68	.66	.65	.37	.58	.51	.60	.62	.53	.50	.66	.59	.74	.45	--				
16	.62	.58	.41	.36	.54	.43	.50	.41	.37	.31	.61	.56	.70	.42	.60	--			
17	.61	.58	.60	.51	.49	.46	.61	.59	.66	.37	.56	.52	.60	.51	.59	.42	--		
18	.52	.61	.71	.30	.42	.51	.67	.77	.49	.54	.60	.41	.66	.46	.64	.43	.56	--

1. Achievement Orientation
2. Adaptability
3. Accurate Self Assessment
4. Conflict Management
5. Change Catalyst
6. Service Orientation
7. Developing Others
8. Empathy
9. Emotional Self-Awareness

10. Emotional Self Control
11. Influence
12. Initiative
13. Leadership
14. Organizational Awareness
15. Optimism
16. Self-Confidence
17. Transparency
18. Teamwork & Collaboration

Table 34: Inter-competency correlations for total others ratings scored data (n=6396).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	--																	
2	.71	--																
3	.50	.60	--															
4	.54	.50	.48	--														
5	.73	.61	.46	.58	--													
6	.61	.65	.58	.45	.50	--												
7	.65	.62	.62	.49	.58	.57	--											
8	.49	.66	.74	.44	.43	.60	.66	--										
9	.54	.61	.73	.49	.48	.54	.65	.72	--									
10	.37	.53	.60	.28	.31	.41	.50	.69	.58	--								
11	.70	.70	.64	.55	.63	.63	.68	.66	.64	.50	--							
12	.73	.69	.49	.56	.67	.60	.52	.42	.47	.26	.67	--						
13	.75	.71	.65	.54	.70	.64	.76	.63	.65	.46	.79	.70	--					
14	.53	.56	.48	.39	.41	.49	.53	.56	.54	.48	.65	.43	.54	--				
15	.64	.68	.63	.43	.58	.56	.66	.70	.63	.66	.69	.51	.70	.52	--			
16	.67	.61	.40	.47	.60	.54	.55	.42	.44	.34	.64	.61	.72	.48	.58	--		
17	.60	.60	.64	.48	.55	.60	.64	.66	.68	.51	.60	.46	.62	.53	.65	.47	--	
18	.55	.62	.75	.47	.48	.59	.74	.77	.68	.55	.72	.49	.70	.54	.69	.48	.64	--

1. Achievement Orientation
2. Adaptability
3. Accurate Self Assessment
4. Conflict Management
5. Change Catalyst
6. Service Orientation
7. Developing Others
8. Empathy
9. Emotional Self-Awareness

10. Emotional Self Control
11. Influence
12. Initiative
13. Leadership
14. Organizational Awareness
15. Optimism
16. Self-Confidence
17. Transparency
18. Teamwork & Collaboration

 0511-9889-HAYG

ECI 2.0 Norms

Norms were calculated for the overall sample (see Table 32), and gender, functional area, geography, and job level in the following tables.

Norms are based on the entire ECI Database—approximately 21,000 participants. Norms are provided for self and total others based on both average-item and scored data where available. ECI raw data is scored or weighted using an algorithm that gives more "credit" for higher ratings on items that correspond to higher levels within a competency. Items are written to reflect developmental characteristics such that higher-level items reflect increasingly sophisticated behaviors for each emotional intelligence competency. For example, for Leadership, a lower-level item is, "leads by example" while a higher-level item is, "articulates a compelling vision." Because the higher-level item is more "difficult" and requires more "leadership," the scoring algorithm gives more weight to higher ratings on these competencies. This technique ensures that higher-level behaviors are recognized, and it also serves to increase variability of scores.

Those assessed by Hay on the ECI can compare their scores to the various norm groups as well the "overall sample" above in Table 32.

The percentage of participants who do not provide demographic information is approximately 17%.

Norms: Gender (Average-Item)

Table 35: Norms and descriptive statistics for males and females based on self and total others' ratings with average-item data.

| ECI 2.0 Cluster | Competency | Female | | | | Male | | | |
| | | Self (n=6231) | | Tot. Oth. (n=6463) | | Self (n=10703) | | Tot. Oth. (n=11152) | |
		M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	4.23	.52	3.22	.70	4.04	.56	2.95	.67
	Accurate Self Assessment	3.89	.47	3.62	.50	3.87	.47	3.54	.48
	Self-Confidence	3.93	.61	4.15	.41	4.06	.59	4.16	.40
Self-Management	Emotional Self Control	3.57	.55	3.73	.47	3.64	.56	3.75	.46
	Transparency	4.13	.50	3.52	.53	4.11	.51	3.46	.51
	Adaptability	3.97	.50	3.69	.45	3.97	.48	3.68	.41
	Achievement	4.03	.50	3.68	.52	4.06	.49	3.70	.48
	Initiative	3.66	.53	3.23	.49	3.70	.50	3.27	.47
	Optimism	4.24	.49	3.94	.46	4.25	.49	3.93	.45
Social Awareness	Empathy	4.21	.48	4.00	.46	4.09	.51	3.83	.44
	Organizational Awareness	3.89	.64	3.59	.58	3.91	.61	3.63	.55
	Service Orientation	4.34	.49	4.02	.56	4.27	.51	3.95	.54
Relationship Management	Developing Others	4.05	.56	3.69	.61	4.00	.54	3.57	.56
	Inspirational Leadership	3.73	.68	3.71	.60	3.80	.65	3.65	.56
	Change Catalyst	3.81	.57	3.56	.53	3.85	.55	3.58	.49
	Influence	3.81	.60	3.49	.57	3.81	.57	3.50	.52
	Conflict Management	3.29	.59	2.85	.52	3.38	.55	2.93	.49
	Teamwork & Collaboration	4.16	.46	4.00	.43	4.10	.47	3.91	.42

 0511-9889-HAYG

Norms: Gender (Scored)

Table 36: Norms and descriptive scored statistics for males and females based on self and total others' ratings with scored data.

ECI 2.0 Cluster	Competency	Female				Male			
		Self (n=2117)		Tot. Oth. (n=2126)		Self (n=3495)		Tot. Oth. (n=3499)	
		M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	3.16	.55	2.96	.39	2.98	.57	2.81	.41
	Accurate Self Assessment	2.89	.52	2.94	.43	2.86	.52	2.85	.46
	Self-Confidence	3.54	.47	3.73	.30	3.60	.44	3.72	.29
Self-Management	Emotional Self Control	2.74	.58	3.02	.44	2.84	.59	3.03	.46
	Transparency	3.20	.49	3.13	.36	3.17	.51	3.03	.37
	Adaptability	3.66	.37	3.72	.26	3.65	.38	3.68	.27
	Achievement	2.99	.52	3.02	.36	3.05	.50	2.99	.37
	Initiative	3.61	.41	3.67	.30	3.62	.40	3.63	.30
	Optimism	3.28	.47	3.27	.35	3.29	.48	3.23	.36
Social Awareness	Empathy	3.77	.31	3.74	.29	3.71	.36	3.65	.33
	Organizational Awareness	2.94	.58	3.09	.38	2.94	.57	3.04	.39
	Service Orientation	3.76	.34	3.79	.26	3.72	.37	3.74	.29
Relationship Management	Developing Others	3.03	.59	3.06	.43	2.99	.58	2.95	.45
	Inspirational Leadership	2.77	.61	2.97	.47	2.84	.61	2.90	.48
	Change Catalyst	2.83	.58	2.87	.39	2.87	.57	2.82	.40
	Influence	2.91	.57	3.02	.39	2.89	.58	2.95	.40
	Conflict Management	3.60	.40	3.69	.26	3.64	.36	3.67	.25
	Teamwork & Collaboration	3.14	.52	3.16	.39	3.10	.52	3.07	.40

Norms: Job Function (Average-Item 1 of 2)

Table 37: Norms by job function based on self and total others' ratings with average-item data.

ECI 2.0 Cluster	Competency	Finance and Accounting				Management Information Systems				Human Resources				Marketing				Sales			
		Self (n=1208)		Tot. Oth. (n=1283)		Self (n=598)		Tot. Oth. (n=626)		Self (n=1536)		Tot. Oth. (n=1592)		Self (n=857)		Tot. Oth. (n=911)		Self (n=2003)		Tot. Oth. (n=2104)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	4.03	.56	2.82	.69	4.05	.57	2.81	.63	4.24	.53	3.34	.71	4.07	.56	2.94	.63	4.14	.53	3.12	.58
	Accurate Self Assessment	3.85	.47	3.42	.51	3.84	.46	3.48	.44	3.89	.47	3.66	.49	3.86	.47	3.51	.46	3.95	.47	3.62	.45
	Self-Confidence	3.97	.61	4.08	.43	3.96	.63	4.06	.38	3.90	.59	4.12	.41	4.07	.59	4.13	.39	4.22	.55	4.26	.36
Self-Management	Emotional Self Control	3.62	.57	3.73	.47	3.62	.56	3.73	.44	3.55	.57	3.75	.47	3.55	.57	3.67	.46	3.62	.55	3.73	.45
	Transparency	4.11	.53	3.39	.56	4.09	.51	3.34	.49	4.16	.48	3.59	.53	4.08	.50	3.34	.50	4.17	.49	3.47	.47
	Adaptability	3.94	.49	3.58	.44	3.96	.46	3.64	.40	3.97	.48	3.67	.44	3.97	.47	3.65	.41	4.01	.48	3.70	.41
	Achievement	4.03	.50	3.55	.55	4.04	.48	3.61	.47	3.98	.50	3.61	.53	4.08	.47	3.64	.48	4.16	.47	3.80	.45
	Initiative	3.57	.52	3.10	.49	3.66	.50	3.19	.46	3.69	.51	3.23	.49	3.77	.50	3.33	.45	3.77	.49	3.35	.43
	Optimism	4.19	.51	3.80	.47	4.24	.51	3.86	.40	4.21	.48	3.92	.44	4.27	.49	3.92	.44	4.37	.46	4.05	.41
Social Awareness	Empathy	4.07	.50	3.76	.46	4.08	.52	3.79	.42	4.23	.48	4.07	.44	4.11	.50	3.80	.43	4.18	.48	3.89	.42
	Organizational Awareness	3.88	.63	3.55	.58	3.89	.64	3.58	.55	3.95	.60	3.71	.56	3.89	.59	3.59	.57	3.96	.60	3.65	.52
	Service Orientation	4.18	.54	3.69	.61	4.25	.53	3.98	.49	4.30	.48	4.03	.53	4.31	.50	4.00	.51	4.40	.48	4.10	.49
Relationship Management	Developing Others	3.93	.54	3.42	.60	3.98	.55	3.44	.50	4.01	.56	3.75	.60	3.93	.54	3.36	.57	4.16	.53	3.71	.55
	Inspirational Leadership	3.63	.69	3.42	.60	3.71	.65	3.50	.51	3.70	.65	3.67	.58	3.83	.59	3.63	.54	3.98	.61	3.81	.53
	Change Catalyst	3.80	.57	3.46	.53	3.90	.53	3.61	.46	3.82	.56	3.62	.51	3.83	.55	3.51	.50	3.87	.54	3.55	.46
	Influence	3.66	.62	3.27	.57	3.73	.58	3.40	.50	3.85	.56	3.56	.54	3.83	.57	3.51	.51	4.00	.54	3.66	.48
	Conflict Management	3.28	.57	2.80	.53	3.35	.56	2.88	.50	3.39	.56	2.94	.53	3.34	.53	2.88	.49	3.42	.57	2.87	.50
	Teamwork & Collaboration	4.06	.48	3.82	.44	4.09	.47	3.89	.40	4.14	.46	4.04	.41	4.09	.47	3.88	.42	4.19	.44	3.98	.41

0511-9889-HAYG

Norms: Job Function (Average-Item 2 of 2)

Table 37 Continued: Norms by job function based on self and total others' ratings with average-item data.

ECI 2.0 Cluster	Competency	Research & Development				Administration				Professional/Technical				Manufacturing/ Production				General Manager/CEO			
		Self (n=560)		Tot. Oth. (n=579)		Self (n=1717)		Tot. Oth. (n=1755)		Self (n=2951)		Tot. Oth. (n=3103)		Self (n=1359)		Tot. Oth. (n=1431)		Self (n=1353)		Tot. Oth. (n=1426)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	4.02	.56	2.85	.70	4.18	.55	3.20	.69	4.06	.56	2.91	.72	4.01	.55	2.99	.58	4.10	.56	3.10	.67
	Accurate Self Assessment	3.80	.47	3.49	.47	3.94	.46	3.68	.51	3.84	.47	3.56	.48	3.84	.46	3.51	.44	3.84	.47	3.53	.49
	Self-Confidence	3.94	.60	4.10	.40	4.08	.59	4.24	.42	3.93	.61	4.11	.40	4.05	.58	4.13	.39	4.12	.56	4.26	.37
Self-Management	Emotional Self Control	3.62	.58	3.73	.49	3.72	.53	3.85	.47	3.61	.55	3.76	.46	3.60	.56	3.68	.44	3.62	.57	3.70	.47
	Transparency	4.06	.50	3.40	.51	4.17	.51	3.59	.51	4.07	.51	3.44	.52	4.09	.48	3.45	.46	4.18	.49	3.57	.52
	Adaptability	3.97	.49	3.67	.41	4.02	.50	3.76	.45	3.96	.49	3.68	.43	3.94	.47	3.67	.37	4.00	.46	3.73	.39
	Achievement	4.02	.49	3.67	.44	4.08	.51	3.79	.53	3.97	.49	3.62	.49	4.06	.48	3.74	.45	4.17	.46	3.88	.43
	Initiative	3.68	.53	3.25	.47	3.72	.50	3.30	.48	3.62	.52	3.18	.48	3.66	.49	3.26	.42	3.82	.49	3.44	.45
	Optimism	4.18	.49	3.86	.44	4.33	.47	4.05	.46	4.17	.49	3.85	.46	4.26	.47	3.94	.41	4.33	.48	4.07	.42
Social Awareness	Empathy	4.08	.49	3.82	.44	4.21	.49	4.02	.44	4.10	.50	3.87	.46	4.04	.50	3.76	.42	4.09	.52	3.85	.45
	Organizational Awareness	3.82	.63	3.54	.55	4.01	.62	3.72	.56	3.83	.63	3.54	.58	3.85	.60	3.56	.50	3.99	.58	3.70	.53
	Service Orientation	4.20	.50	3.84	.61	4.35	.48	4.04	.52	4.29	.50	3.98	.53	4.25	.50	3.93	.51	4.27	.53	3.99	.54
Relationship Management	Developing Others	3.96	.51	3.48	.54	4.07	.54	3.74	.59	3.97	.56	3.61	.57	4.00	.51	3.57	.51	4.02	.52	3.65	.52
	Inspirational Leadership	3.72	.65	3.62	.53	3.87	.66	3.78	.61	3.66	.66	3.60	.56	3.79	.63	3.61	.52	3.96	.61	3.85	.54
	Change Catalyst	3.79	.58	3.50	.48	3.88	.57	3.65	.52	3.73	.56	3.48	.52	3.94	.54	3.66	.47	4.01	.51	3.78	.46
	Influence	3.72	.58	3.42	.50	3.86	.60	3.58	.56	3.72	.59	3.40	.55	3.77	.57	3.46	.48	3.90	.54	3.66	.47
	Conflict Management	3.31	.54	2.87	.49	3.35	.59	2.92	.49	3.30	.58	2.86	.52	3.40	.54	3.02	.44	3.47	.51	3.06	.46
	Teamwork & Collaboration	4.08	.45	3.90	.40	4.19	.45	4.00	.42	4.11	.46	3.93	.42	4.07	.46	3.86	.40	4.12	.47	3.93	.41

0511-9889-HAYG

Norms: Job Function (Scored 1 of 2)

Table 38: Norms by job function based on self and total others' ratings with scored data.

ECI 2.0 Cluster	Competency	Finance and Accounting Self (n=428)		Finance and Accounting Tot. Oth. (n=426)		Management Information Systems Self (n=203)		Management Information Systems Tot. Oth. (n=203)		Human Resources Self (n=462)		Human Resources Tot. Oth. (n=460)		Marketing Self (n=323)		Marketing Tot. Oth. (n=324)		Sales Self (n=850)		Sales Tot. Oth. (n=848)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	3.00	.59	2.79	.39	3.00	.56	2.79	.38	3.13	.57	3.02	.41	3.00	.60	2.78	.40	3.09	.55	2.90	.35
	Accurate Self Assessment	2.80	.56	2.79	.45	2.83	.50	2.82	.40	2.86	.53	3.00	.44	2.88	.52	2.81	.45	2.97	.51	2.93	.41
	Self-Confidence	3.58	.44	3.68	.31	3.58	.43	3.69	.28	3.46	.50	3.71	.29	3.57	.46	3.69	.30	3.69	.39	3.76	.25
Self-Management	Emotional Self Control	2.81	.60	3.00	.46	2.78	.59	3.03	.46	2.74	.60	3.08	.44	2.75	.62	2.96	.43	2.85	.56	3.03	.41
	Transparency	3.25	.51	3.03	.38	3.05	.46	3.00	.36	3.19	.50	3.19	.36	3.16	.48	2.96	.39	3.23	.50	3.06	.34
	Adaptability	3.63	.38	3.63	.30	3.63	.38	3.66	.24	3.66	.36	3.73	.26	3.65	.37	3.67	.25	3.69	.36	3.72	.24
	Achievement	3.05	.51	2.93	.38	2.99	.47	2.96	.34	2.96	.54	3.00	.36	3.07	.49	2.94	.37	3.13	.48	3.06	.34
	Initiative	3.51	.42	3.52	.33	3.61	.40	3.62	.27	3.62	.40	3.69	.28	3.67	.36	3.66	.30	3.66	.36	3.68	.26
	Optimism	3.31	.48	3.20	.39	3.25	.50	3.21	.35	3.25	.45	3.28	.33	3.26	.49	3.20	.35	3.38	.46	3.30	.33
Social Awareness	Empathy	3.71	.35	3.63	.33	3.69	.39	3.65	.31	3.78	.31	3.78	.27	3.74	.36	3.64	.33	3.79	.31	3.69	.29
	Organizational Awareness	2.97	.54	3.04	.37	2.91	.62	3.04	.37	2.94	.57	3.10	.40	2.92	.56	2.99	.40	3.01	.57	3.11	.35
	Service Orientation	3.68	.41	3.65	.31	3.69	.40	3.74	.26	3.71	.38	3.77	.26	3.77	.32	3.77	.26	3.78	.33	3.80	.23
Relationship Management	Developing Others	3.01	.57	2.90	.43	2.97	.59	2.90	.39	2.99	.62	3.10	.42	2.87	.58	2.78	.44	3.20	.54	3.10	.42
	Inspirational Leadership	2.70	.59	2.74	.46	2.74	.57	2.82	.41	2.69	.62	2.96	.44	2.82	.58	2.82	.46	3.04	.57	3.05	.44
	Change Catalyst	2.85	.60	2.76	.40	2.90	.57	2.84	.38	2.81	.54	2.94	.39	2.83	.55	2.76	.39	2.91	.55	2.88	.36
	Influence	2.85	.60	2.87	.40	2.86	.57	2.92	.35	2.92	.56	3.05	.39	2.90	.58	2.93	.38	3.04	.55	3.06	.37
	Conflict Management	3.57	.40	3.60	.28	3.60	.35	3.66	.25	3.66	.37	3.76	.26	3.64	.37	3.67	.25	3.67	.34	3.71	.23
	Teamwork & Collaboration	3.08	.53	3.00	.42	3.06	.50	3.08	.38	3.11	.53	3.22	.39	3.11	.52	3.03	.39	3.20	.50	3.15	.37

0511-9889-HAYG

Norms: Job Function (Scored 2 of 2)

Table 38 Continued: Norms by job function based on self and total others' ratings with scored data.

ECI 2.0 Cluster	Competency	Research & Development				Administration				Professional/ Technical				Manufacturing/ Production				General Manager/ CEO			
		Self (n=187)		Tot. Oth. (n=191)		Self (n=637)		Tot. Oth. (n=640)		Self (n=892)		Tot. Oth. (n=892)		Self (n=440)		Tot. Oth. (n=442)		Self (n=343)		Tot. Oth. (n=348)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	2.96	.54	2.74	.39	3.10	.56	2.93	.40	3.00	.57	2.85	.41	2.93	.60	2.72	.39	2.98	.58	2.84	.42
	Accurate Self Assessment	2.80	.50	2.77	.44	2.91	.53	2.92	.47	2.85	.52	2.89	.45	2.85	.52	2.78	.42	2.79	.52	2.81	.47
	Self-Confidence	3.54	.47	3.69	.31	3.62	.45	3.77	.28	3.54	.48	3.71	.31	3.57	.45	3.66	.31	3.64	.41	3.79	.28
Self-Management	Emotional Self Control	2.82	.61	3.01	.42	2.87	.57	3.10	.45	2.78	.59	3.03	.48	2.77	.57	2.89	.47	2.77	.61	2.96	.49
	Transparency	3.08	.51	2.98	.40	3.22	.51	3.15	.34	3.13	.51	3.07	.37	3.15	.50	2.96	.35	3.23	.49	3.05	.41
	Adaptability	3.65	.38	3.67	.26	3.68	.38	3.74	.25	3.65	.38	3.70	.27	3.65	.37	3.63	.28	3.64	.36	3.70	.27
	Achievement	3.01	.50	2.97	.32	3.04	.51	3.07	.37	2.98	.51	2.99	.37	3.00	.48	2.93	.38	3.18	.49	3.06	.37
	Initiative	3.60	.42	3.63	.29	3.64	.40	3.67	.30	3.58	.41	3.63	.30	3.56	.40	3.58	.30	3.73	.35	3.73	.28
	Optimism	3.26	.49	3.20	.33	3.36	.49	3.34	.33	3.21	.47	3.19	.37	3.27	.46	3.15	.37	3.33	.48	3.29	.37
Social Awareness	Empathy	3.71	.33	3.62	.31	3.77	.33	3.74	.29	3.71	.36	3.67	.33	3.69	.37	3.58	.34	3.73	.35	3.63	.36
	Organizational Awareness	2.83	.62	2.94	.42	3.07	.54	3.15	.37	2.86	.59	3.02	.39	2.92	.54	2.95	.36	3.00	.52	3.07	.42
	Service Orientation	3.71	.34	3.69	.29	3.77	.33	3.79	.26	3.74	.36	3.77	.26	3.71	.35	3.69	.30	3.72	.39	3.75	.29
Relationship Management	Developing Others	2.97	.54	2.92	.39	3.06	.56	3.08	.43	2.94	.60	2.97	.45	2.95	.55	2.86	.44	2.96	.58	2.95	.47
	Inspirational Leadership	2.76	.62	2.82	.42	2.88	.60	3.03	.46	2.69	.62	2.89	.49	2.76	.57	2.78	.47	3.01	.60	3.04	.51
	Change Catalyst	2.80	.57	2.74	.39	2.93	.59	2.93	.40	2.75	.59	2.77	.40	2.93	.57	2.83	.41	3.04	.55	2.94	.42
	Influence	2.76	.59	2.90	.37	2.96	.54	3.06	.38	2.79	.61	2.93	.40	2.84	.57	2.86	.40	2.92	.55	3.02	.42
	Conflict Management	3.54	.41	3.60	.28	3.66	.37	3.71	.24	3.58	.40	3.65	.25	3.66	.36	3.68	.22	3.70	.34	3.72	.24
	Teamwork & Collaboration	3.11	.47	3.06	.34	3.17	.53	3.16	.38	3.07	.54	3.10	.41	3.07	.51	2.98	.39	3.12	.48	3.11	.41

0511-9889-HAYG

Norms: Geography (Average-Item 1 of 2)

Table 39: Norms by geography based on self and total others' ratings with average-item data.

ECI 2.0 Cluster	Competency	United States				Canada				UK				Europe			
		Self (n=8939)		Tot. Oth. (n=9221)		Self (n=455)		Tot. Oth. (n=518)		Self (n=3142)		Tot. Oth. (n=3202)		Self (n=1171)		Tot. Oth. (n=1243)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Self-Awareness	Emotional Self-Awareness	4.15	.54	3.12	.69	4.08	.56	2.95	.68	4.12	.55	3.03	.74	3.99	.54	2.85	.66
	Accurate Self Assessment	3.93	.47	3.68	.46	3.89	.46	3.52	.47	3.82	.45	3.52	.48	3.79	.47	3.40	.45
	Self-Confidence	4.11	.57	4.25	.37	4.10	.57	4.16	.40	3.81	.63	4.06	.41	3.89	.59	4.02	.42
Self-Management	Emotional Self Control	3.67	.55	3.83	.44	3.64	.57	3.69	.49	3.55	.56	3.69	.44	3.52	.56	3.63	.46
	Transparency	4.19	.49	3.55	.51	4.12	.49	3.40	.50	3.98	.49	3.39	.53	3.97	.51	3.37	.50
	Adaptability	4.03	.49	3.74	.42	4.01	.47	3.66	.45	3.91	.46	3.65	.42	3.82	.47	3.55	.41
	Achievement	4.11	.49	3.77	.49	4.09	.49	3.62	.54	3.93	.47	3.60	.48	3.93	.51	3.56	.49
	Initiative	3.74	.51	3.30	.47	3.71	.52	3.24	.52	3.61	.50	3.22	.48	3.60	.51	3.21	.46
	Optimism	4.31	.48	4.03	.43	4.30	.48	3.91	.47	4.14	.48	3.84	.45	4.13	.48	3.78	.43
Social Awareness	Empathy	4.17	.50	3.96	.45	4.19	.49	3.86	.43	4.10	.50	3.87	.46	4.06	.47	3.74	.42
	Organizational Awareness	3.98	.61	3.70	.54	3.88	.62	3.54	.57	3.84	.64	3.55	.57	3.77	.64	3.52	.56
	Service Orientation	4.35	.49	4.05	.51	4.37	.50	3.95	.59	4.23	.50	3.95	.53	4.18	.50	3.78	.61
Relationship Management	Developing Others	4.05	.55	3.66	.59	4.03	.54	3.57	.56	3.97	.53	3.63	.61	3.88	.54	3.45	.53
	Inspirational Leadership	3.85	.64	3.77	.56	3.82	.64	3.62	.57	3.61	.68	3.60	.60	3.62	.71	3.50	.55
	Change Catalyst	3.86	.56	3.60	.50	3.81	.56	3.48	.53	3.80	.56	3.60	.51	3.83	.53	3.54	.49
	Influence	3.89	.58	3.57	.53	3.79	.59	3.42	.56	3.73	.56	3.49	.53	3.66	.59	3.35	.54
	Conflict Management	3.39	.56	2.91	.51	3.38	.57	2.89	.53	3.30	.56	2.92	.52	3.28	.60	2.88	.49
	Teamwork & Collaboration	4.14	.46	3.98	.42	4.13	.47	3.90	.45	4.10	.46	3.94	.43	4.08	.45	3.84	.39

0511-9889-HAYG

Norms: Geography (Average-Item 2 of 2)

Table 39 Continued: Norms by geography based on self and total others' ratings with average-item data.

ECI 2.0 Cluster	Competency	Asia				South America				Middle East				Australia			
		Self (n=869)		Tot. Oth. (n=919)		Self (n=288)		Tot. Oth. (n=361)		Self (n=120)		Tot. Oth. (n=120)		Self (n=1405)		Tot. Oth. (n=1462)	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Self-Awareness	Emotional Self-Awareness	3.94	.56	2.89	.61	4.03	.57	2.94	.63	3.90	.71	2.95	.57	4.10	.56	3.00	.67
	Accurate Self Assessment	3.86	.45	3.34	.48	3.58	.50	3.06	.58	3.83	.48	3.36	.47	3.80	.47	3.51	.42
	Self-Confidence	3.96	.56	3.90	.47	4.36	.53	4.30	.35	3.95	.60	4.05	.40	3.83	.58	4.07	.38
Self-Management	Emotional Self Control	3.54	.50	3.47	.50	3.57	.62	3.65	.51	3.43	.60	3.55	.46	3.53	.54	3.68	.42
	Transparency	4.11	.52	3.32	.52	4.31	.47	3.82	.50	4.01	.53	3.41	.47	4.04	.50	3.41	.48
	Adaptability	3.95	.48	3.54	.47	3.94	.49	3.63	.42	3.80	.54	3.56	.40	3.91	.46	3.66	.40
	Achievement	4.06	.48	3.57	.54	4.14	.48	3.83	.47	4.04	.51	3.60	.48	3.96	.47	3.58	.47
	Initiative	3.70	.51	3.19	.49	3.49	.51	3.13	.42	3.61	.60	3.16	.48	3.62	.50	3.20	.45
	Optimism	4.26	.47	3.73	.51	4.36	.50	4.04	.42	4.15	.57	3.82	.41	4.15	.49	3.84	.42
Social Awareness	Empathy	4.08	.49	3.67	.49	4.10	.50	3.81	.44	4.04	.53	3.69	.47	4.07	.49	3.86	.41
	Organizational Awareness	3.72	.64	3.38	.59	3.83	.63	3.43	.54	3.70	.67	3.39	.47	3.86	.59	3.56	.54
	Service Orientation	4.26	.48	3.74	.61	4.07	.60	3.54	.73	4.16	.58	3.75	.60	4.25	.51	4.01	.50
Relationship Management	Developing Others	4.10	.52	3.53	.55	4.08	.48	3.75	.53	4.16	.53	3.56	.51	3.92	.54	3.54	.53
	Inspirational Leadership	3.91	.60	3.46	.60	3.73	.67	3.50	.53	3.73	.72	3.50	.56	3.62	.61	3.56	.53
	Change Catalyst	3.83	.58	3.39	.56	3.94	.55	3.58	.44	3.81	.63	3.47	.45	3.76	.56	3.49	.51
	Influence	3.71	.60	3.33	.54	3.70	.61	3.34	.56	3.64	.60	3.35	.47	3.71	.55	3.42	.51
	Conflict Management	3.32	.54	2.87	.47	3.13	.57	2.82	.49	3.26	.55	2.89	.42	3.28	.57	2.83	.51
	Teamwork & Collaboration	4.16	.45	3.83	.45	4.18	.47	3.93	.41	4.10	.49	3.79	.43	4.06	.46	3.92	.40

0511-9889-HAYG

Norms: Job Level (Average-Item 1 of 2)

Table 40: Norms by job level based on self and total others' ratings with average-item data.

ECI 2.0 Cluster	Competency	Entry-Level Individual Contributor				Mid-Level Individual Contributor				Senior-Level Individual Contributor			
		Self (n=302)		Tot. Oth. (n=303)		Self (n=1332)		Tot. Oth. (n=1362)		Self (n=1318)		Tot. Oth. (n=1357)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	4.09	.60	3.08	.77	4.15	.59	3.08	.75	4.13	.56	3.12	.76
	Accurate Self Assessment	3.91	.49	3.69	.50	3.90	.48	3.63	.49	3.88	.48	3.64	.49
	Self-Confidence	3.85	.64	4.04	.44	3.85	.65	4.05	.43	4.00	.64	4.16	.40
Self-Management	Emotional Self Control	3.59	.58	3.75	.48	3.57	.57	3.73	.46	3.59	.58	3.76	.47
	Transparency	3.98	.55	3.46	.51	4.02	.53	3.46	.54	4.11	.48	3.53	.54
	Adaptability	3.84	.55	3.57	.52	3.91	.54	3.61	.48	3.99	.49	3.70	.44
	Achievement	3.88	.55	3.49	.57	3.92	.54	3.51	.56	4.02	.50	3.63	.52
	Initiative	3.43	.60	3.03	.54	3.54	.55	3.11	.51	3.68	.52	3.23	.49
	Optimism	4.17	.53	3.92	.45	4.15	.52	3.83	.47	4.19	.50	3.88	.48
Social Awareness	Empathy	4.20	.51	4.01	.47	4.19	.49	3.98	.46	4.18	.51	3.99	.45
	Organizational Awareness	3.48	.73	3.19	.61	3.74	.69	3.41	.59	3.87	.64	3.55	.59
	Service Orientation	4.25	.52	3.77	.70	4.33	.50	4.02	.57	4.38	.51	4.07	.56
Relationship Management	Developing Others	3.67	.70	3.33	.72	3.82	.63	3.45	.68	3.96	.58	3.61	.65
	Inspirational Leadership	3.46	.79	3.44	.70	3.55	.74	3.51	.63	3.70	.67	3.66	.60
	Change Catalyst	3.49	.63	3.18	.63	3.61	.59	3.32	.56	3.74	.58	3.45	.53
	Influence	3.49	.70	3.11	.69	3.66	.66	3.29	.62	3.80	.60	3.44	.57
	Conflict Management	2.94	.67	2.48	.62	3.13	.62	2.66	.56	3.27	.58	2.85	.52
	Teamwork & Collaboration	4.03	.49	3.90	.46	4.09	.49	3.95	.45	4.12	.48	3.99	.43

0511-9889-HAYG

Norms: Job Level (Average-Item 2 of 2)

Table 40 Continued: Norms by job level based on self and total others' ratings with average-item data.

ECI 2.0 Cluster	Competency	First-Level Manager				Mid-Level Manager				Senior Manager/Executive			
		Self (n=2789)		Tot. Oth. (n=2886)		Self (n=5288)		Tot. Oth. (n=5464)		Self (n=6175)		Tot. Oth. (n=6521)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	4.07	.56	2.96	.68	4.09	.55	3.00	.66	4.13	.54	3.10	.70
	Accurate Self Assessment	3.89	.48	3.58	.49	3.88	.47	3.55	.48	3.85	.46	3.55	.48
	Self-Confidence	3.98	.62	4.10	.42	4.01	.60	4.13	.41	4.09	.56	4.23	.38
Self-Management	Emotional Self Control	3.63	.55	3.74	.47	3.61	.55	3.73	.45	3.63	.55	3.76	.46
	Transparency	4.07	.51	3.38	.50	4.11	.50	3.44	.50	4.18	.50	3.55	.52
	Adaptability	3.93	.49	3.64	.44	3.97	.47	3.68	.41	4.01	.47	3.73	.40
	Achievement	3.97	.51	3.60	.51	4.05	.47	3.68	.48	4.12	.47	3.81	.46
	Initiative	3.58	.52	3.12	.47	3.68	.50	3.24	.46	3.78	.49	3.39	.45
	Optimism	4.21	.50	3.89	.47	4.24	.48	3.91	.45	4.31	.47	4.01	.43
Social Awareness	Empathy	4.15	.49	3.88	.45	4.11	.50	3.86	.45	4.12	.50	3.88	.46
	Organizational Awareness	3.81	.66	3.47	.55	3.90	.60	3.62	.53	4.02	.57	3.76	.53
	Service Orientation	4.28	.50	3.93	.55	4.29	.49	3.98	.53	4.29	.51	3.99	.54
Relationship Management	Developing Others	4.04	.54	3.65	.58	4.03	.52	3.62	.55	4.05	.52	3.65	.55
	Inspirational Leadership	3.70	.70	3.59	.58	3.77	.64	3.64	.56	3.89	.61	3.79	.54
	Change Catalyst	3.73	.56	3.42	.50	3.85	.54	3.58	.47	3.96	.52	3.73	.45
	Influence	3.77	.62	3.38	.55	3.82	.56	3.49	.52	3.88	.54	3.63	.47
	Conflict Management	3.27	.58	2.74	.49	3.36	.56	2.91	.48	3.46	.52	3.05	.46
	Teamwork & Collaboration	4.15	.45	3.94	.43	4.13	.46	3.94	.42	4.12	.46	3.94	.42

0511-9889-HAYG

Norms: Job Level (Scored 1 of 2)

Table 41: Norms by job level based on self and total others' ratings with scored data.

ECI 2.0 Cluster	Competency	Entry-Level Individual Contributor				Mid-Level Individual Contributor				Senior-Level Individual Contributor			
		Self (n=120)		Tot. Oth. (n=121)		Self (n=487)		Tot. Oth. (n=481)		Self (n=489)		Tot. Oth. (n=486)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	3.04	.64	2.91	.42	3.09	.60	2.90	.42	3.08	.57	2.96	.44
	Accurate Self Assessment	2.91	.56	2.96	.47	2.90	.53	2.93	.47	2.85	.55	2.96	.46
	Self-Confidence	3.49	.51	3.65	.34	3.49	.50	3.65	.35	3.60	.46	3.77	.28
Self-Management	Emotional Self Control	2.88	.62	3.08	.51	2.75	.61	3.03	.46	2.82	.62	3.10	.46
	Transparency	3.06	.50	3.11	.37	3.10	.51	3.11	.39	3.15	.50	3.15	.36
	Adaptability	3.58	.44	3.75	.25	3.64	.37	3.69	.28	3.68	.36	3.75	.27
	Achievement	2.88	.54	2.99	.34	2.93	.54	2.95	.39	3.04	.51	3.04	.37
	Initiative	3.43	.50	3.62	.27	3.51	.44	3.60	.32	3.65	.36	3.68	.31
	Optimism	3.25	.53	3.34	.37	3.24	.47	3.24	.41	3.28	.52	3.29	.35
Social Awareness	Empathy	3.73	.37	3.74	.32	3.76	.32	3.74	.31	3.76	.35	3.75	.30
	Organizational Awareness	2.61	.60	2.85	.38	2.81	.60	2.98	.41	2.95	.61	3.08	.42
	Service Orientation	3.63	.51	3.79	.27	3.76	.35	3.78	.29	3.78	.36	3.83	.25
Relationship Management	Developing Others	2.71	.73	2.85	.42	2.82	.61	2.90	.49	2.97	.61	3.05	.47
	Inspirational Leadership	2.60	.68	2.86	.47	2.66	.58	2.85	.50	2.77	.64	2.96	.49
	Change Catalyst	2.48	.64	2.69	.39	2.66	.60	2.73	.39	2.78	.58	2.83	.38
	Influence	2.62	.62	2.91	.38	2.80	.60	2.95	.42	2.94	.59	3.03	.42
	Conflict Management	3.42	.47	3.51	.31	3.50	.44	3.61	.29	3.60	.39	3.69	.27
	Teamwork & Collaboration	2.92	.57	3.10	.40	3.11	.52	3.12	.43	3.13	.53	3.20	.39

0511-9889-HAYG

Norms: Job Level (Scored 2 of 2)

Table 41 Continued: Norms by job level based on self and total others' ratings with scored data.

ECI 2.0 Cluster	Competency	First-Level Manager				Mid-Level Manager				Senior Manager/Executive			
		Self (n=1018)		Tot. Oth. (n=1015)		Self (n=1768)		Tot. Oth. (n=1777)		Self (n=1832)		Tot. Oth. (n=1847)	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Awareness	Emotional Self-Awareness	3.00	.57	2.82	.39	3.03	.57	2.83	.39	3.06	.57	2.90	.41
	Accurate Self Assessment	2.87	.54	2.87	.43	2.88	.51	2.85	.45	2.87	.51	2.89	.43
	Self-Confidence	3.54	.47	3.67	.31	3.57	.45	3.70	.30	3.64	.41	3.79	.24
Self-Management	Emotional Self Control	2.80	.58	3.00	.45	2.79	.58	3.00	.45	2.81	.58	3.04	.45
	Transparency	3.13	.51	3.02	.35	3.18	.50	3.03	.37	3.24	.49	3.11	.37
	Adaptability	3.63	.38	3.67	.27	3.65	.37	3.68	.27	3.68	.36	3.72	.24
	Achievement	2.94	.52	2.94	.37	3.05	.49	2.99	.37	3.11	.49	3.06	.34
	Initiative	3.52	.43	3.58	.31	3.61	.39	3.62	.29	3.70	.36	3.71	.27
	Optimism	3.25	.48	3.21	.36	3.29	.47	3.22	.36	3.32	.47	3.28	.33
Social Awareness	Empathy	3.73	.34	3.67	.32	3.73	.36	3.65	.33	3.74	.33	3.68	.31
	Organizational Awareness	2.88	.57	3.01	.36	2.95	.56	3.04	.37	3.04	.55	3.14	.38
	Service Orientation	3.71	.37	3.73	.29	3.73	.35	3.73	.29	3.74	.35	3.77	.26
Relationship Management	Developing Others	3.05	.57	3.01	.43	3.04	.56	2.98	.44	3.04	.57	3.00	.45
	Inspirational Leadership	2.75	.61	2.87	.47	2.82	.60	2.89	.47	2.91	.60	3.02	.46
	Change Catalyst	2.76	.57	2.77	.38	2.88	.55	2.83	.40	2.98	.55	2.94	.39
	Influence	2.86	.58	2.93	.38	2.90	.58	2.95	.40	2.95	.55	3.04	.39
	Conflict Management	3.59	.39	3.64	.25	3.65	.35	3.68	.25	3.69	.35	3.73	.23
	Teamwork & Collaboration	3.13	.51	3.10	.40	3.12	.52	3.08	.39	3.13	.51	3.12	.40

0511-9889-HAYG

ECI Frequently Asked Questions

1. **What does a competency score represent?**
    The score reported for a competency indicates the <u>competency level</u> that is most
    characteristic of the participant's day-to-day work behaviors based on the feedback of others.

2. **Why are some competency scores reported as a decimal?**
    Competency scores can be decimals because they are <u>weighted averages</u> of non self-rater
    categories.

3. **What do you mean by "weighted average"?**
    Behaviors that are associated with higher levels are more difficult to display and therefore are
    considered to be "worth more." To reflect this when calculating competency scores, items that are
    associated with higher levels are weighted more than those associated with lower levels. Final
    competency scores (i.e., "total others") are calculated by computing an average of all weighted
    responses in non self-rater categories.

4. **Why are response options and competency scores in different metrics?**
    Utilizing a five-point scale, raters make determinations about how characteristic particular behaviors
    are of the individual they are assessing. Raters are <u>not</u> making a determination about which <u>level</u> of
    a competency is most characteristic of this individual. The behaviors (i.e., items) they are evaluating
    are associated with specific levels of a competency. During processing of the feedback reports, a
    mathematical equation is utilized to translate raters' responses into the competency levels they
    represent.

5. **If the target level is the top level of the competency, does the participant have to receive the
    highest rating possible (i.e., 5) on every item associated with that competency to hit the target
    level?**
    There is a tendency for raters to NOT give participants ratings at either extreme of the response scale (i.e.,
    1 or 5). To correct for this, using a mathematical equation, competency scales are "stretched" slightly
    below the lowest level and slightly above the highest level. In other words, the highest possible
    level a participant can actually achieve is slightly above the highest level of a particular competency.
    Similarly, the lowest possible level a participant can actually achieve is slightly below the lowest
    level. In the case where the target level is set at the top level of the competency, although
    participants will have to score very high on each item to "have" the competency, they DO NOT have
    to receive a perfect (i.e., 5) rating on everything.

Conclusions

Based on the body of research presented, the ECI has shown strong evidence for the assessment, development, and training of emotional intelligence. The ECI is supported by very good reliability and validity evidence from research from a variety of worldwide organizational contexts.

Reliability analysis with large samples has shown very high internal consistency; however, evidence for test-retest reliability is limited, based on the convenience data that was obtained from an intervention study. Future research is needed to specifically test stability coefficients with both two- and four-week periods between assessments. Given the difficulty of carrying out these designs with client samples, this project might be ideally conducted by external or academic researchers.

The ECI also demonstrated a very good degree of construct validity. ECI scores were associated with various measures of similar constructs (e.g., Type A and B personality, Myers-Briggs, Big Five personality factors), while they also demonstrated less association with more cognitive/analytical abilities. Most importantly (from a consulting perspective), the ECI was found to be predictive of performance in a wide variety of organizational contexts and roles (e.g., college leadership, sales, finance, call center agents, and firefighters).

Several studies have shown that ECI competencies can be developed. Programs designed to increase emotional intelligence have been shown to be successful. Also, another study (Jolly, 2001) showed that Empathy can be developed through alternative methods that are not specifically designed for emotional intelligence training. These results support our contention that emotional intelligence can be learned when specific effort is applied. Future research will utilize comparison groups and control groups to isolate the effect of EI training programs from those experiences (e.g. Jolly, 2001) that have been shown to similarly increase emotional intelligence competencies.

ECI-U

Validation Studies for the ECI-U

The ECI-U was developed to be used in a university setting. The instrument was created in response to the growing trend in universities to develop the whole student. The ECI-U fills the need to provide an assessment of students' emotional intelligence competencies. The instrument contains 63 items measuring 21 competencies, 3 in the self-awareness cluster, 7 in the self-management cluster, 3 in the social awareness cluster, and 8 in the relationship management cluster. The competencies measured in the ECI-U are the same as those measured with the ECI 2.0 with the following exceptions. Transparency has been renamed trustworthiness; conscientiousness, communication, and building bonds have been added. The response scale has been revised by deleting the "don't know" response. Thus there are five responses: 1=never, 2=rarely, 3=sometimes, 4=often, and 5=consistently.

Construct Validity

Emotional Intelligence and Student Well-Being

Bagshaw (2002) studied 80 students at the University of Leeds (50 female, 30 male). She examined the relationship between student emotional intelligence as measured by the ECI-U and their ability to cope with university life and their level of concern about their financial situation. Ability to cope with university life was measured with 14 questions based on a health questionnaire developed by Professor Michael Barkham at the University of Leeds. Concern about financial situation was measured with the following question, "To what extent are financial issues currently a problem for you?" Bagshaw found a significant correlation between overall emotional intelligence measured by summing the answers to all questions on the ECI-U and student well-being (r=.376, p=.001 one-sided, df=78). She also examined the relationship of well-being to each competency cluster (see Table 42).

Table 42: Correlation of each Competency to Well-Being

Competency Cluster	Pearson's Correlation	Significance
Self-Awareness	.357	p<0.001
Self-Management	.355	p<0.001
Social Awareness	.234	p<0.050
Relationship Management	.361	p<0.050

There were no significant relationships between emotional intelligence and either financial concerns (r=.001, p=.497 one-tailed, df=78) or time devoted to activities during the week (r = .147, p=.096 one-tailed, df=78), measured with one question asking, "How many hours a week do you spend on society activities?"

Emotional Intelligence and Work Performance

Curry (2003) conducted a study where 200 employees were sent the ECI-U Self; half were rated competent/average workers, and the other half were rated outstanding. 136 of their respective managers were also sent the ECI-U Self. Eleven employees with competent ratings, and eighteen employees who were rated outstanding completed the ECI-U Self.

Twenty-eight out of the one-hundred-thirty-six managers submitted the ECI-U Rater. The response rate was 26%. (88 out of 336). Each employee who completed the ECI-U was measured on four emotional intelligence competencies: self-awareness, self-management, social awareness, and relationship management. It was found that those who were classified outstanding performers scored higher in all four

clusters of E.I., except for one component, organizational awareness, under the social awareness cluster. A possible explanation suggested for this was the transition of the company being taken over by a larger company in 2002 could have affected the excellent performers differently than the competent. Overall, the author's hypothesis was met: those who are excellent performers generally have a higher level of emotional intelligence.

Demographic Studies Using the ECI-U

ECI-U and Gender

In a study of Puerto Rican men and women working full or pat time and attending college part time by Rivera (2003) with the ECI-U found that in others' views, they showed 7 competencies more often at home than at work, and only 1 competency more often at work than at home. But there was an important difference when the sample was separated by gender. Working men showed 8 of the competencies more at work than at home (Emotional Self-Awareness, Accurate Self-Assessment, Emotional Self-Control, Trustworthiness, Conscientiousness, Service Orientation, Change Catalyst, and Building Bonds). Meanwhile, women showed 9 competencies more at home than at work (Self-confidence, Trustworthiness, Adaptability, Service Orientation, Organizational Awareness, Inspirational Leadership, Communications, Conflict Management, and Teamwork).

0511-9889-HAYG

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0511-9889-HAYG

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APPENDIX:
Norms and Descriptive Statistics for the ECI 1.0

Reliability

Internal Consistency for the ECI 1.0

Table 43 presents Chronbach's alpha internal consistency coefficients for the ECI clusters and competencies. For total others ratings, the alpha coefficients range from .73 (Trustworthiness) to .92 (Empathy) with an overall average internal consistency coefficient of .85. For self ratings, the alpha coefficients range from .61 (Accurate Self-Assessment) to .85 (Service Orientation) with an overall average internal consistency coefficient of .75. These results suggest that total others ratings are more stable and reliable than self ratings although no statistical tests were conducted to determine whether the difference is meaningful. These findings do support our general contention that self ratings are less reliable and consequently less valid (i.e., poor predictor of performance relative to total others' ECI ratings). Research presented later in this manual presents predictive validity evidence for both self and total others ratings on the ECI. This pattern of results also suggests that total others responses may be subject to a general halo effect, commonly seen in multi-rater (i.e., 360) instruments. The tendency for raters to apply an overall impression of a person may contribute to inflated reliability estimates on total others ratings. These results, however, indicate very good internal consistency reliability for the ECI.

Table 43: Chronbach's alpha coefficients for self and total others ECI 1.0 ratings from the Hay North American Database. Scores based on average item scores.

ECI 1.0 Cluster	Competency	Total Others Rating (N=3,931)	Self Rating (N=4,001)
		Alpha Coefficient	Alpha Coefficient
Self-Awareness	Emotional Self-Awareness	.74	.61
	Accurate Self-Assessment	.83	.68
	Self-Confidence	.88	.80
Self-Management	Self-Control	.89	.78
	Trustworthiness	.73	.74
	Conscientiousness	.90	.81
	Adaptability	.77	.60
	Achievement Orientation	.87	.78
	Initiative	.83	.72
Social Awareness	Empathy	.92	.81
	Organizational Awareness	.84	.75
	Service Orientation	.91	.85
Social Skills	Developing Others	.88	.77
	Leadership	.80	.69
	Influence	.83	.73
	Communication	.86	.77
	Change Catalyst	.91	.84
	Conflict Management	.86	.75
	Building Bonds	.84	.75
	Teamwork & Collaboration	.91	.81
ECI Clusters (N=5,354)	Self-Awareness	.76	.61
	Self-Management	.88	.79
	Social Awareness	.81	.71
	Social Skills	.96	.92

   0511-9889-HAYG

ECI 1.0 Descriptive Statistics

Descriptive statistics are based on the North American ECI Database (NAD), which contains approximately 4,000 participants. Total sample includes 34,377 raters (self and total others, not aggregated). ECI self rating cases number 3,992 (12%) and ECI other-rating cases number 30,385 (88%).

The means and standard deviations presented below (Table 44) are based on item averages with no weighting or scoring for competency level.

For total others ratings, aggregate statistics for number of raters per participant:

- Mean = 4.12
- Standard Deviation = 4.03
- Median = 3.00 (27% of sample)
- Mode = 3.00 (3,345 cases)
- 97% of cases are rated by 1–9 subordinates
- 52% of cases are rated by either 1, 2, or 3 subordinates

Means and Standard Deviations

Table 44: Means and standard deviations for self and total others ratings based on the ECI 1.0

ECI 1.0 Cluster	Competency	Total Others Rating (N=3,931)		Self Rating (N=4,002)	
		Mean	Stan. Dev.	Mean	Stan. Dev.
Self-Awareness	Emotional Self-Awareness	5.32	.67	5.58	.74
	Accurate Self-Assessment	4.99	.77	5.49	.94
	Self-Confidence	5.52	.66	5.55	.83
Self-Management	Self-Control	5.17	.84	5.19	1.01
	Trustworthiness	5.23	.70	5.73	.82
	Conscientiousness	5.80	.72	5.85	.86
	Adaptability	5.05	.62	5.31	.80
	Achievement Orientation	5.27	.69	5.54	.83
	Initiative	5.18	.67	5.37	.82
Social Awareness	Empathy	5.27	.74	5.55	.81
	Organizational Awareness	5.57	.70	5.58	.93
	Service Orientation	5.38	.78	5.56	1.00
Social Skills	Developing Others	5.09	.79	5.43	.87
	Leadership	5.02	.78	5.13	.97
	Influence	4.97	.65	5.12	.85
	Communication	5.17	.71	5.41	.86
	Change Catalyst	5.04	.79	5.31	.94
	Conflict Management	4.94	.72	5.19	.91
	Building Bonds	5.45	.75	5.26	1.00
	Teamwork/Collaboration	5.44	.71	5.69	.76

 0511-9889-HAYG

Inter-Competency Correlations

Table 45: Inter-competency correlations for total others ratings (N=3,931).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	--																			
2	.68	--																		
3	.43	.53	--																		
4	.73	.79	.37	--																	
5	.51	.61	.57	.60	--																
6	.49	.61	.50	.60	.58	--															
7	.44	.63	.29	.74	.53	.50	--														
8	.63	.67	.62	.63	.57	.56	.49	--													
9	.40	.57	.46	.58	.52	.54	.51	.56	--											
10	.57	.76	.59	.69	.64	.60	.63	.61	.52	--										
11	.48	.64	.78	.48	.62	.57	.40	.70	.60	.66	--									
12	.50	.67	.79	.49	.60	.60	.37	.64	.50	.74	.81	--								
13	.65	.73	.58	.74	.64	.64	.57	.70	.57	.67	.70	.65	--							
14	.51	.66	.74	.57	.65	.61	.48	.66	.56	.67	.77	.75	.78	--						
15	.56	.65	.68	.57	.70	.64	.45	.64	.44	.69	.74	.76	.70	.77	--					
16	.64	.73	.62	.74	.65	.67	.58	.64	.50	.73	.64	.68	.74	.73	.75	--				
17	.51	.62	.73	.51	.61	.54	.41	.70	.45	.65	.79	.77	.72	.81	.77	.67	--			
18	.64	.69	.54	.73	.63	.60	.63	.72	.50	.70	.64	.61	.75	.70	.72	.71	.70	--		
19	.62	.75	.57	.69	.63	.61	.51	.55	.46	.67	.56	.67	.66	.68	.68	.71	.60	.62	--	
20	.64	.81	.51	.83	.67	.67	.68	.67	.66	.72	.60	.63	.77	.75	.68	.77	.66	.74	.79	--

1. Emotional Self-Awareness	11. Achievement Orientation
2. Accurate Self-Assessment	12. Initiative
3. Self-Confidence	13. Developing Others
4. Empathy	14. Leadership
5. Organizational Awareness	15. Influence
6. Service Orientation	16. Communication
7. Self-Control	17. Change Catalyst
8. Trustworthiness	18. Conflict Management
9. Conscientiousness	19. Building Bonds
10. Adaptability	20. Teamwork and Collaboration

ECI 1.0 Norms

Norms were calculated for the overall sample, gender, functional area, geography, and job level.

Norms are based on the North American and U.K. ECI Databases (NAUK)—approximately 6,000 participants. Other geographies (e.g., Europe and Asia) are under-represented.

Norms are provided for self and total others based on scored data. ECI raw data is scored or weighted using an algorithm that gives more "credit" for higher ratings on items that correspond to higher levels within a competency. Items are written to reflect developmental characteristics such that higher-level items reflect increasingly sophisticated behaviors for each emotional intelligence competency. For example, for Leadership, a lower-level item is, "leads by example" while a higher-level item is, "articulates a compelling vision." Because the higher-level item is more "difficult" and requires more "leadership," the scoring algorithm gives more weight to higher ratings on these competencies. This technique ensures that higher-level behaviors are recognized, and it also serves to increase variability of scores.

Those assessed by Hay on the ECI can compare their scores to the various norm groups as well the "overall sample" below in Table 46.

Because the majority of participants do not provide demographic information, the samples for each norm group is small relative to the size of the database.

Norm Category	Percent Missing Data
Functional Area	88%
Geographic Area	76%
Gender	59%
Job Level	75%

Overall Sample

Table 46 presents average scores across all 20 ECI competencies by total others ratings. Although no statistical tests were performed to compare groups, some interesting patterns seem to exist. Overall, participants were rated highest in Empathy, Achievement Orientation, and Service Orientation while lowest in Accurate Self-Assessment and Self-Control.

ECI scores do not show a high degree of variance. Standard deviations for all 20 competencies are low/moderate (mean standard deviation = .45). The distribution of scores is slightly negatively skewed (mean skewness = 1.09) and relatively peaked (mean kurtosis = 1.64).

Table 46: Norms and descriptive statistics for ECI 1.0 overall sample with NAUK database for total others ratings.

ECI1.0 Cluster	Norms Total Others	Overall Sample (N=5,360)			
	Competency	Mean	SD	Skewness	Kurtosis
Self-Awareness	Emotional Self-Awareness	3.5291	.37776	-1.146	1.769
	Accurate Self-Assessment	2.6082	.31452	-.999	1.070
	Self-Confidence	4.2444	.53395	-.934	1.106
Self-Manage-ment	Self-Control	2.6214	.36219	-1.267	1.611
	Trustworthiness	2.7149	.26132	-1.331	2.379
	Conscientiousness	2.8407	.24803	-2.333	6.642
	Adaptability	3.2978	.39460	-.768	.918
	Achievement Orientation	4.9336	.61916	-.850	1.042
	Initiative	3.4139	.40935	-.917	1.024
Social Awareness	Empathy	4.8696	.71037	-.857	.934
	Organizational Awareness	3.6031	.38320	-1.472	2.924
	Service Orientation	4.4358	.47810	-1.307	2.558
Social Skills	Developing Others	3.4008	.44331	-.965	1.073
	Leadership	3.3256	.49099	-.923	.829
	Influence	4.0298	.52280	-.708	.637
	Communication	3.3927	.43246	-.901	.890
	Change Catalyst	4.0461	.57952	-.791	.606
	Conflict Management	3.3004	.43657	-.862	.932
	Building Bonds	3.5204	.42717	-1.298	2.084
	Teamwork & Collaboration	4.2966	.55411	-1.215	1.898

Norms: Gender

Table 47 presents average scores across all 20 ECI 1.0 competencies by total others ratings for males and females. Although no statistical tests were performed to compare groups, some interesting patterns seem to exist. For example, overall, males were rated highest in Empathy and Achievement Orientation while lowest in Accurate Self-Assessment, Self-Control, and Trustworthiness. Women were rated highest in Empathy, Service Orientation, and Achievement Orientation while lowest in Self-Control, Accurate Self-Assessment, Trustworthiness, and Conscientiousness.

Table 47: Norms and descriptive statistics for males and females from NAUK database based on total others ratings.

ECI 1.0 Cluster	Norms Total Others	Males (N=1,773)				Females (N=845)			
	Competency	M	SD	Skewness	Kurtosis	M	SD	Skewness	Kurtosis
Self-Aware-ness	Emotional Self-Awareness	3.49	.38	-1.17	1.94	3.60	.36	1.21	1.78
	Accurate Self-Assessment	2.56	.33	-.90	.82	2.70	.27	1.02	.79
	Self-Confidence	4.21	.55	-.95	1.28	4.28	.51	.87	.65
Self-Manage-ment	Self-Control	2.61	.37	-1.26	1.54	2.63	.350	1.25	1.56
	Trustworthiness	2.69	.27	-1.25	2.15	2.75	.24	1.34	1.87
	Conscientiousness	2.81	.27	-2.17	5.83	2.88	.21	2.95	11.06
	Adaptability	3.29	.39	-.72	.70	3.34	.40	.80	.82
	Achievement Orientation	4.90	.63	-.84	1.06	4.97	.61	.90	.90
	Initiative	3.39	.42	-.91	.95	3.45	.41	.98	.93
Social Aware-ness	Empathy	4.76	.73	-.84	1.00	5.06	.64	.88	.69
	Organizational Awareness	3.58	.39	-1.56	3.64	3.61	.40	1.35	1.70
	Service Orientation	4.37	.50	-1.23	2.25	4.51	.44	1.27	2.05
Social Skills	Developing Others	3.34	.46	-.83	.69	3.52	.41	1.16	1.52
	Leadership	3.28	.51	-.89	.81	3.38	.46	.94	.72
	Influence	3.98	.54	-.76	.93	4.08	.51	.80	.72
	Communication	3.36	.44	-.90	1.08	3.47	.41	.94	.82
	Change Catalyst	4.01	.59	-.74	.45	4.12	.55	.80	.52
	Conflict Management	3.26	.44	-.78	.91	3.35	.43	.89	.74
	Building Bonds	3.47	.44	-1.12	1.44	3.57	.40	1.29	1.74
	Teamwork & Collaboration	4.23	.57	-1.16	1.75	4.39	.51	1.20	1.48

0511-9889-HAYG

Norms: Job Function

Table 48 provides norms for ECI 1.0 participants within the following job functions: finance and accounting, management of information systems, human resources, marketing, and sales. Again, although no statistical tests were performed to compare groups, some interesting patterns seem to exist. For example, those in sales were rated highest in Influence; those in human resources were highest in Empathy; and those in sales were highest in Achievement Orientation.

Table 48: Norms by job function from NAUK database based on total others ratings.

ECI 1.0 Cluster	Norms Total Others	Finance and Accounting (N=119)		Management of Information Systems (N=48)		Human Resources (N=146)		Marketing (N=86)		Sales (N=151)		Research & Development (N=30)		Adminstration (N=178)		Technical & Professional (N=292)		Manufacturing Production (N=144)		GM/CEO (N=91)	
	Competency	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Aware-ness	Emotional Self-Awareness	3.58	.32	3.55	.30	3.64	.31	3.54	.27	3.66	.27	3.44	.41	3.61	.35	3.49	.39	3.49	.34	3.58	.45
	Accurate Self-Assessment	2.59	.30	2.57	.30	2.73	.22	2.61	.26	2.72	.22	2.47	.35	2.66	.28	2.56	.31	2.55	.28	2.60	.34
	Self-Confidence	4.28	.46	4.19	.53	4.24	.51	4.25	.45	4.44	.43	4.05	.66	4.31	.52	4.14	.62	4.20	.49	4.43	.59
Self-Manage-ment	Self-Control	2.63	.38	2.63	.36	2.71	.28	2.65	.29	2.71	.31	2.62	.27	2.72	.29	2.61	.36	2.62	.33	2.64	.40
	Trustworthiness	2.74	.21	2.69	.24	2.79	.20	2.74	.19	2.81	.22	2.61	.28	2.77	.24	2.67	.28	2.67	.23	2.76	.31
	Conscientiousness	2.92	.12	2.81	.22	2.85	.24	2.85	.22	2.91	.14	2.78	.29	2.87	.21	2.83	.26	2.82	.21	2.85	.29
	Adaptability	3.36	.38	3.32	.34	3.33	.38	3.36	.28	3.43	.30	3.09	.47	3.39	.37	3.25	.43	3.26	.33	3.37	.43
	Achievement Orientation	5.01	.51	4.82	.60	4.93	.60	4.96	.50	5.24	.45	4.76	.65	5.02	.62	4.79	.70	4.85	.54	5.15	.72
	Initiative	3.44	.36	3.43	.36	3.42	.38	3.52	.32	3.58	.28	3.24	.50	3.47	.40	3.32	.46	3.32	.37	3.55	.44
Social Aware-ness	Empathy	4.89	.67	4.83	.68	5.24	.49	4.95	.57	5.09	.54	4.71	.80	5.07	.63	4.79	.71	4.73	.64	4.86	.88
	Organizational Awareness	3.61	.36	3.56	.34	3.64	.35	3.60	.34	3.74	.29	3.39	.48	3.69	.33	3.51	.43	3.56	.32	3.66	.43
	Service Orientation	4.40	.38	4.38	.47	4.48	.40	4.52	.36	4.62	.33	4.26	.49	4.54	.44	4.37	.56	4.31	.43	4.54	.49
Social Skills	Developing Others	3.42	.39	3.37	.42	3.58	.33	3.40	.38	3.63	.31	3.29	.47	3.48	.41	3.33	.47	3.33	.37	3.45	.51
	Leadership	3.32	.45	3.28	.45	3.35	.44	3.39	.43	3.58	.36	3.15	.63	3.44	.44	3.25	.53	3.27	.45	3.45	.55
	Influence	4.04	.50	4.01	.45	4.10	.44	4.08	.50	4.32	.39	3.80	.68	4.13	.50	3.93	.56	3.97	.47	4.13	.59
	Communication	3.37	.42	3.36	.38	3.51	.36	3.46	.34	3.57	.33	3.26	.53	3.49	.39	3.33	.46	3.30	.39	3.44	.49
	Change Catalyst	4.06	.55	4.09	.46	4.16	.52	4.11	.47	4.35	.41	3.91	.72	4.19	.53	3.91	.63	4.07	.50	4.24	.64
	Conflict Management	3.34	.43	3.25	.41	3.47	.35	3.34	.33	3.48	.32	3.19	.40	3.41	.40	3.25	.43	3.27	.38	3.32	.53
	Building Bonds	3.54	.35	3.51	.43	3.62	.32	3.61	.35	3.70	.28	3.33	.58	3.60	.39	3.46	.47	3.47	.39	3.57	.49
	Teamwork & Collaboration	4.32	.51	4.26	.51	4.46	.41	4.41	.44	4.56	.38	4.15	.65	4.44	.48	4.24	.56	4.23	.49	4.37	.67

0511-9889-HAYG

Norms: Geography

Table 49 provides norms for ECI 1.0 participants within the following geographies: United States, Canada, United Kingdom, South America, Europe, Asia, and Australia. Sample size differences and cultural differences in assessment make direct comparisons between countries difficult. Although tentative comparisons between countries are possible, they ought to be interpreted with caution.

Table 49: Norms by geography from NAUK database based on total others ratings.

ECI 1.0 Cluster	Norms Total Others	United States (N=1418)		Canada (N=120)		United Kingdom (N=292)		South America (N=53)		Europe (N=81)		Asia (N=35)		Australia (N=20)	
	Competency	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Aware-ness	Emotional Self-Awareness	3.60	.35	3.56	.31	3.34	.32	3.60	.30	3.36	.43	3.30	.38	3.50	.30
	Accurate Self-Assessment	2.65	.29	2.60	.30	2.42	.35	2.64	.29	2.45	.39	2.47	.29	2.65	.29
	Self-Confidence	4.33	.50	4.20	.48	3.96	.53	4.30	.51	3.75	.64	3.85	.66	4.28	.52
Self-Manage-ment	Self-Control	2.68	.33	2.64	.33	2.49	.36	2.63	.38	2.48	.35	2.52	.33	2.62	.36
	Trustworthiness	2.76	.23	2.74	.22	2.59	.26	2.71	.21	2.42	.35	2.56	.33	2.71	.25
	Conscientiousness	2.87	.21	2.86	.21	2.75	.30	2.84	.28	2.77	.26	2.80	.25	2.78	.25
	Adaptability	3.37	.37	3.32	.32	3.11	.35	3.29	.37	2.98	.42	3.15	.39	3.31	.27
	Achievement Orientation	5.04	.57	4.91	.50	4.62	.53	4.99	.50	4.33	.75	4.38	.69	4.89	.56
	Initiative	3.49	.38	3.38	.35	3.20	.40	3.46	.34	3.11	.50	3.04	.48	3.29	.46
Social Aware-ness	Empathy	4.99	.67	4.93	.60	4.50	.69	4.88	.73	4.52	.77	4.55	.62	4.82	.64
	Organizational Awareness	3.65	.36	3.58	.37	3.45	.37	3.54	.31	3.28	.49	3.30	.46	3.57	.36
	Service Orientation	4.52	.43	4.42	.40	4.20	.46	4.42	.45	4.10	.54	4.16	.57	4.18	.52
Social Skills	Developing Others	3.48	.41	3.44	.35	3.15	.39	3.43	.39	3.14	.49	3.19	.42	3.21	.55
	Leadership	3.41	.45	3.36	.44	3.05	.43	3.39	.45	2.94	.52	2.98	.56	3.28	.52
	Influence	4.12	.49	4.04	.43	3.72	.42	4.02	.51	3.51	.60	3.71	.59	3.97	.37
	Communication	3.48	.39	3.39	.38	3.16	.38	3.48	.36	3.07	.51	3.12	.44	3.29	.47
	Change Catalyst	4.15	.54	4.10	.48	3.81	.51	4.08	.54	3.50	.68	3.58	.64	4.04	.53
	Conflict Management	3.38	.40	3.35	.38	3.07	.35	3.32	.38	2.97	.44	3.13	.40	3.29	.47
	Building Bonds	3.58	.40	3.57	.39	3.31	.41	3.54	.38	3.24	.47	3.33	.44	3.44	.40
	Teamwork & Collaboration	4.40	.51	4.37	.45	4.05	.43	4.38	.51	3.98	.58	3.98	.56	4.10	.65

0511-9889-HAYG

Norms: Job Level

Table 50 provides norms for ECI 1.0 participants within the following job levels: entry-level individual contributor, mid-level individual contributor, senior-level individual contributor, and first-, mid-, and senior-level managers. Although no statistical tests were performed to compare groups, some interesting patterns seem to exist. For example, senior-level individual contributors and managers seem to have higher Self-Confidence scores than their lower-level counterparts. Levels of Achievement Orientation seem to increase linearly by job level for both individual contributors and managers.

Table 50: Norms by job level from NAUK database based on total others ratings.

ECI 1.0 Cluster	Norms Total Others	Entry-Level Individual Contributor (N=23)		Mid-Level Individual Contributor (N=133)		Senior-Level Individual Contributor (N=190)		First-Level Manager (N=248)		Mid-Level Manager (N=645)		Senior-Level Manager (N=689)	
	Competency	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Self-Aware-ness	Emotional Self-Awareness	3.50	.30	2.69	.29	2.67	.31	2.60	.29	2.61	.30	2.61	.32
	Accurate Self-Assessment	2.63	.39	3.61	.35	3.62	.34	3.49	.38	3.57	.34	3.56	.37
	Self-Confidence	3.94	.67	4.08	.58	4.32	.52	4.14	.52	4.25	.52	4.36	.51
Self-Manage-ment	Self-Control	2.54	.38	2.63	.35	2.67	.32	2.64	.34	2.65	.33	2.64	.36
	Trustworthiness	2.63	.30	2.71	.26	2.77	.22	2.68	.27	2.72	.25	2.75	.25
	Conscientiousness	2.82	.20	2.87	.25	2.87	.20	2.85	.22	2.87	.21	2.84	.25
	Adaptability	3.12	.50	3.28	.43	3.36	.40	3.27	.39	3.33	.37	3.37	.36
	Achievement Orientation	4.51	.77	4.80	.68	4.99	.57	4.80	.61	4.96	.59	5.06	.58
	Initiative	3.23	.50	3.37	.44	3.49	.39	3.31	.40	3.43	.39	3.51	.38
Social Aware-ness	Empathy	4.80	.64	5.08	.71	5.09	.68	4.86	.71	4.90	.64	4.88	.71
	Organizational Awareness	3.16	.50	3.53	.42	3.59	.40	3.53	.35	3.61	.37	3.67	.35
	Service Orientation	4.07	.59	4.46	.52	4.54	.43	4.42	.49	4.46	.43	4.47	.45
Social Skills	Developing Others	3.32	.47	3.46	.44	3.49	.43	3.38	.44	3.44	.41	3.42	.44
	Leadership	3.13	.49	3.31	.52	3.35	.47	3.29	.47	3.36	.46	3.40	.47
	Influence	3.68	.59	3.96	.55	4.08	.53	3.96	.52	4.07	.50	4.12	.48
	Communication	3.31	.44	3.44	.44	3.49	.42	3.37	.42	3.42	.41	3.44	.41
	Change Catalyst	3.66	.72	3.93	.60	4.09	.56	3.94	.55	4.11	.54	4.18	.55
	Conflict Management	3.04	.50	3.30	.44	3.34	.43	3.31	.42	3.34	.40	3.35	.42
	Building Bonds	3.34	.45	3.58	.41	3.58	.43	3.50	.43	3.55	.39	3.55	.41
	Teamwork & Collaboration	4.14	.46	4.41	.53	4.36	.53	4.30	.56	4.35	.50	4.35	.53

0511-9889-HAYG