

Development and Validation of a Situational Judgment Test of Emotional Intelligence

Sudeep Sharma*, Mugdha Gangopadhyay, Elizabeth Austin*** and Manas K. Mandal******

*Olin Business School, Washington University in St. Louis, 1 Brookings drive, St. Louis, MO 63130, USA.
sharmas@wustl.edu

**Department of Psychology, University of Delhi, Delhi, India

***Department of Psychology, University of Edinburgh, Edinburgh, UK

****Department of Humanities and Social Sciences, IIT-Kharagpur, Kharagpur, West Bengal, India

The present study describes the development and validation of a situational judgment test (SJT) of emotional intelligence (EI). Initially, 80 situations and three response alternatives for each situation were created based on the available theoretical models. Principal component factor analysis with direct oblimin rotation of data ($N = 213$) yielded a three-factor structure with 46 items. These factors were (1) utilizing own emotion, (2) sensing other's emotion, and (3) understanding emotional context. Additional studies showed that the measure had good internal consistency and test-retest reliability. None of the three factors strongly correlated with the Big Five factors of personality (NEO Five-Factor Inventory, thus establishing its identity as a construct distinct from personality. Findings of confirmatory factor analysis on secondary data reconfirm the three-factor model for a 46-item SJT of EI. The second study also found no correlation among these three factors, intelligence scores measured using Raven's Matrices, and trait EI score measured using the Trait Emotional Intelligence Questionnaire. The third study was conducted in order to determine the relationship of SJT of EI with academic achievement and life satisfaction. All three factors of SJT-based EI measure were significantly associated with academic achievement and life satisfaction.

1. Introduction

Emotional Intelligence (EI) is perhaps one of the most widely researched construct in the behavioral domain. Two basic models, the mental ability (Mayer & Salovey, 1997) and mixed (Bar-On, 1997; Goleman, 1995), are available for test construction. While the mental ability model 'account (s) for how people's emotional perception and understanding vary in their accuracy' (Brackett & Mayer, 2003, p. 88), the mixed models primarily focuses on noncognitive traits, leading to effective coping or success under environmental pressures. According to Perez, Petrides, and Furnham (2005), the manner in which variables of individual differences (in this case, EI) are measured (self-report vs. maximum performance) has a direct impact on their operationalization.

In recognition of this basic fact, Petrides and Furnham (2000a, 2000b, 2001) differentiated between trait EI (or

emotional efficacy) and ability EI (or cognitive-emotional ability). Both being very different constructs, the ability model is often measured using performance-based tests, whereas the trait model is often measured using self-reports (see Perez et al., 2005; Lievens & Chan, 2010). Some of the trait measures of EI include Trait Meta Mood Scale (Salovey, Mayer, Goldman, Turvey, & Palfai, 1995), Emotional Quotient Inventory (EQ-i: Bar-On, 1997), Schutte Emotional Intelligence Scale (Schutte et al., 1998), Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, Perez, & Furnham, 2003), and Emotional Competence Inventory (ECI; Boyatzis, Goleman, & Rhee, 1999). Examples of ability measures of EI are also aplenty: Multifactor Emotional Intelligence Scale (Mayer, Caruso, & Salovey, 1999), Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, & Sitarenios, 2003), Freudenthaler and Neubauer Emotional Intelligence Performance Test (Freudenthaler & Neubauer, 2003), and Emotional

Accuracy Research Scale (Mayer & Geher, 1996). Besides the above measures, Lievens and Chan (2010) have also thrown light on the research by MacCann, Wang, Matthews, and Roberts (2010) where they developed situational judgment tests (SJT) for measuring two branches of Mayer and Salovey's EI model – Situational Test of Emotional Understanding and the Situational Test of Emotion Management.

In spite of the availability of many trait and ability measures, research indicates that there are conceptual and methodological problems associated with both approaches to EI measurement. Meta-analytic research (Joseph & Newman, 2010; Van Rooy, Viswesvaran, & Pluta, 2005) has demonstrated that these two models are not measuring the same constructs. Van Rooy and his colleagues (2005) found that measures based on the two models correlated only .14 with one another. Joseph and Newman (2010) in their recent meta-analysis has supported the previous findings and illustrated that correlations among EI construct–method pairings (mixed, performance ability, and self-report ability) are low and nonsignificant. Their findings, therefore, suggest that these different EI measures are not reflecting the same construct.

In addition, previous research consistently found that these two models had different correlates. Most of the facets of EI measures based on the mixed model highly correlated with personality factors but not with cognitive ability (Davies, Stankov, & Roberts, 1998; Dawda & Hart, 2000; Newsome, Day, & Catano, 2000; Schutte et al., 1998). Joseph and Newman (2010) have argued that given several items of mixed EI measures such as EQ-i deal directly with nervousness and anxiety; it therefore comes as no surprise that mixed EI shows a moderate relationship with the emotional stability factor of the Big Five personality dimensions.

Conversely, ability-based EI correlated more with cognitive ability and less with personality. Joseph and Newman (2010) obtained a mean corrected correlation of .28 between performance-based ability EI and cognitive ability and of .11 between mixed EI and cognitive ability. Brackett and Mayer (2003) investigated the convergent, discriminant, and incremental validity of one ability test of EI: the MSCEIT and two self-report mixed model-based measures of EI: the EQ-i and the Schutte et al. EI measure (SREIT). Results indicated that among these EI measures, the MSCEIT was discriminable from personality and well-being measures, while the EQ-i and SREIT shared significant variance with personality measures. Their results also show that ability EI measure and mixed model-based EI measures are weakly related and yield different measurements of the same person. Therefore, previous EI literature consistently have shown that despite the rich tradition of studying EI and a plethora of instruments available to assess EI, each assessment measure ad-

heres to a different factor structure of EI. In other words, there seems to be no consonance regarding what constitutes EI.

Keeping in mind the limitation of the existing EI measures, we propose to develop a SJT of EI. Because of the limitation of the lack of scientific rigor often associated with mixed-based models of EI (Daus & Ashkanasy, 2003; Joseph & Newman, 2010), we propose to develop a SJT within the purview of the theoretical framework of ability model (Mayer & Salovey, 1997) while not denying the relevance of mixed models (Bar-On, 1997; Goleman, 1995) for assessment purposes. We chose to assess EI by creating critical but universal situations that people often face. While the respondent will try to make use of real or imagined subjective experience, the ability to respond will depend on the capacity to judge the situation. In SJT, respondents are presented with sets of alternate courses of action to various critical situations. For each situation, respondents either choose the best and worst options or rate each of the alternative actions in terms of its effectiveness. Lievens and Chan (2010) explain that since respondents have to respond to a realistic scenario, SJTs might constitute a more contextualized way of measuring EI than self-report and performance-based measures (p. 347). Since SJT for the measurement of EI is not widely available in the literature, we chose to examine the factorial structure of the test to draw a parallel with the available models of EI.

1.1. Development of the test

Though past research raised questions about the psychometric efficacy of situation judgment technique in comparison to conventional tests, we find potential merits in using this technique because of five major reasons. First, situational inventories are so-called 'low-fidelity simulations' (Motowidlo, Dunnette, & Carter, 1990) as opposed to 'high-fidelity simulations', which present a veridical representation of the task stimulus and require applicants to actually perform the response. Since in an EI test, we would like to infer how the person is likely to behave in a particular context, the technique appears helpful.

Second, SJT may be constructed with either kind of response instructions: knowledge (e.g., 'Should do' or 'best/worst response') and behavioral tendency (e.g., 'Would do' or 'most likely/least likely response'), see McDaniel and Nguyen (2001). Tests with knowledge instructions had higher correlations with cognitive ability. Tests with behavioral tendency instructions showed higher correlations with personality constructs (see McDaniel, Hartman, Whetzel, & Grubb, 2007). Third, research has established that SJT items correlate with a wide array of constructs such as general cognitive ability, personality, work experience, and job knowledge

(McDaniel & Nguyen, 2001). Hence, SJTs are better conceptualized as methods that can be designed to measure a broad variety of constructs, depending on the domain/criterion of interest (Lievens & Sackett, 2007). Furthermore, since we believe EI might not be a unitary construct (Perez et al., 2005), SJT may be the best available choice.

Fourth, SJT provides strong validity as well, in addition to measuring a broad range of behavioral constructs. Large-scale studies have shown that SJTs have significant criterion-related validities (McDaniel, Morgeson, Finnegan, Campion, & Braverman, 2001) and have incremental validity, over and above cognitive ability and personality tests (Chan & Schmitt, 2002; Clevenger, Pereira, Wiechmann, Schmitt, & Schmidt-Harvey, 2001). Finally, SJTs do not show adverse impact against women or protected minorities (Olson-Buchanan et al., 1998) or at least show very little impact (Motowidlo & Tippins, 1993; Weekley & Jones, 1999) than traditional cognitive ability tests (Clevenger et al., 2001).

1.2. Creation of situations

In the present study, an attempt has been made to develop a SJT-based measure of EI. The theoretical issues related to EI have not been specifically addressed (which is not the focus of this research) though the ability-based model has been considered as the basis for the development of the test. For creating the SJT test items, we took care of the situations (for generality purposes and to avoid unique culture-specific conditions) that are considered in psychometric tests of EI by other EI researchers (Bar-On & Parker, 2000; Cooper & Ayman, 1997; Goleman, 1995; Mayer, Salovey, & Caruso, 2004). In addition, a large number of situations, which demand critical emotional decision making, were created using a variety of resources, involving folk tales, social conditions, peer group interaction, occupational environment, critical life event, daily hassles, superior-subordinate relationship, etc.

We put together an item development expert team to create situational judgment items (scenarios and corresponding behavioral alternatives) for measuring EI. The team consisted of seven experts – three from the field of psychology, two from human resources, and two from other social sciences stream. First, item developers wrote scenarios based on interactions with various social agents like professors, students, managers, sports persons, religious teachers, administrators, doctors, service providers, and housewives. These situations were judged most likely to take place in various life situations and would reflect how a person appraises, utilizes, or manages one's own or other's emotions. Thus, we identified emotionally embedded situations from various walks of life involving

family, occupation, social relationships, cultural activities, accidental events, or personal crises, etc. These situations were translated in the form of stories (within 50 words), which were then rated by five experts in terms of their appropriateness in social situations and emotional embeddedness. Situations that were accepted by all five experts were selected and in the process, 80 situations were accepted and 43 situations were rejected.

1.3. Creation of response alternatives

The next step in this test was to create the response alternatives for each situation. We reviewed different methods for scoring SJT and selected the Most-Least Effectiveness Rating Method (Knapp, Campbell, Borman, Pulakos, & Hanson, 2001) as the basis of scoring (that is, 1 = *least preferred: this action is likely to make the situation worse*, 2 = *somewhat preferred/not preferred: this action is likely to have no/minimum consequence in this situation*, 3 = *most preferred: this action would almost certainly be most productive*). Knapp et al. (2001) found this method to have more desirable psychometric properties than other scoring methods.

For this purpose, 25 psychologists were requested to generate possible responses against each situation alongside 50 randomly drawn nonpsychologists to do the exercise in an open-ended manner. These responses were content analyzed (using a relational analysis technique) and response options for each item were created in terms of their likelihood of occurrence in a social situation. Finally, five experts rated these response options based on their appropriateness as favorable social reactions and chose three alternatives out of these (one response being most favorable and the other being least favorable) for each situation. All five raters used a dichotomous rating (appropriate or inappropriate) and the inter-rater reliability was high (Kendall's coefficient of concordance: $W = .76$). Social desirability for most favorable response alternative was also checked against the frequency of that response option by a group of students ($N = 35$). The idea was to ensure that the test-taker carefully chooses his response and there are no evident good/bad answers. The process helped identify some socially desirable responses (with high frequency of choices), which were modified by the experts themselves. The most favorable response for each situation was given a score of 3 and the least a score of 1, with the average of these scores yielding a score of EI based on SJT.

2. Study 1: Overview

The primary purpose of Study 1 was to construct a multi-situation measure of EI and to examine the factor structure of the measure. The other purpose of

the study was to examine construct and discriminant validity of the measure to test the hypothesis that a SJT-based measure of EI can be created. In Study 1, besides factors extraction, all the factors of SJT correlated with Big Five personality dimensions to provide information about discriminant validity. The most common argument raised by skeptics of EI is that it simply draws from different aspects of personality model (Davies et al., 1998; Dawda & Hart, 2000; Newsome et al., 2000). Researchers found that trait-based characteristics of the EI measures available presently are related to any one of the Big Five personality dimensions, neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience (e.g., Ackerman & Heggestad, 1997; Digman, 1990; Schutte et al., 1998). Therefore, to be useful, scores on a new EI measure should not correlate so highly with any dimension of the Big Five as to be redundant. Previous research also claimed that women would score higher than men in EI measure (see Bjorklund & Kipp, 1996; Goleman, 1995; Schutte et al., 1998). It was observed that women are more adept at emotional expression and recognition tasks than men (Salovey & Mayer, 1990). So, we also examined this argument in Study 1.

2.1. Method

2.1.1. Sample and procedure

The SJT was administered in India to a sample ($N = 213$) involving managers, teachers, doctors, college students, service providers, housewives, senior citizens, etc. 15% of the sample was from the student population. Subjects were recruited keeping in view the representativeness of the sample within the cross-section of the Indian society. Of those, 97 were women and 116 were men. The mean age was 22.77 (standard deviation [SD] = 6.81) with a range of 16 and 46 years. The mean education was 16.2 years (range 10–19 years). Therefore, the test was not administered to a population belonging to low educational strata. All participants volunteered for the study and none reported having any emotional disturbance at the time of testing. Out of 213 participants, 194 participants also completed the NEO Five-Factor Inventory (NEO-FFI) Big Five Personality Inventory (Costa & McCrae, 1992) in order to measure discriminant validity.

Participants from different educational institutes completed the questionnaire in classroom time (average 1 hour). Professionals in the workplaces were given the questionnaire during their office hours with the explicit concurrence of their superiors. Business people gave their responses after business hours. All participants were instructed to judge situations and to choose response alternatives on their own without considering right or wrong responses. They were however required

to mark the 'most preferred' and 'least preferred' response for each situation.

2.1.2. Measure

2.1.2.1. Personality. The questionnaire also included the NEO-FFI in order to assess the relationship between Big Five personality traits and possible factors of the SJT-based EI measure. The NEO-FFI: Form S (Costa & McCrae, 1992) is a 60-item questionnaire measuring the Big Five personality dimensions. Internal consistency value ranges from $r = 0.74$ to 0.89 .

2.2. Results

2.2.1. The exploratory stage

Based on the outcome measure (EI score), an intercorrelation matrix was created and submitted to a principal components factor analysis (PCA) with direct oblimin rotation method (SPSS 13.0; SPSS Inc., Chicago, IL). Besides PCA, we have also done image factor analysis of 80 items with direct oblimin rotation method (SPSS 13.0). As PCA provides all the variance in the factor matrix, the rationale for doing image analysis was to provide a unique solution to account for the common variance among items, thus eliminating specific and error variance (Gorsuch, 1983, p.113; Kline, 1994, p. 51).

The final set of items (see Table 1) revealed a three-factor solution with factors 1, 2, and 3 explaining 14.34, 6.75, and 4.88% of variance, respectively. The three-factor solution was chosen based on the analysis of scree plot in which after the third eigenvalue, there is a strong linear (descending) trend in the remaining eigenvalues. This trend provides mathematical support for a three-factor solution for the data (Bentler & Yuan, 1998; Reise, Waller, & Comrey, 2000). Factors 1, 2, and 3 had large eigenvalues of 6.594, 3.104, and 2.245, respectively. Four items were removed from the final exploratory factor analysis (EFA) structure because they possessed a higher cross-loading on two factors (defined as having factor pattern loadings $>.30$). Out of 80 items, final set of 46 items were selected based on two criteria – (1) their high loadings both in PCA ($>.3$) and in image analysis ($>.2$) based three-factor solution, and (2) all 46 items loaded cleanly on their respective factor, and no item cross-loading was above .30 in PCA and above .20 in image analysis. These factors were labeled based on the item cluster. Appendix A comprises all 46 items with their response options.

2.2.1.1. Factor 1: Utilizing own emotion. Factor 1 consists of 16 items that captures how one utilizes his/her own emotions. Utilizing own emotion refers here to the ability to have perseverance and persuasion skill, to react appropriately, to bounce back from failure, to connect to people, and to have determination, confidence, commitment, and intuition. This factor can be compared

Table 1. Factor loadings of situational judgment test of emotional intelligence (factor loadings greater than |0.3| are shown)

Item no.	Factor1	Factor2	Factor3
SJT37	.536		
SJT42	.641		
SJT43	.560		
SJT46	.438		
SJT47	.559		
SJT49	.478		
SJT53	.473		
SJT55	.590		
SJT58	.509		
SJT60	.421		
SJT64	.385		
SJT66	.605		
SJT69	.323		
SJT71	.619		
SJT76	.318		
SJT79	.306		
SJT2		.523	
SJT3		.524	
SJT4		.545	
SJT5		.328	
SJT6		.362	
SJT7		.390	
SJT8		.417	
SJT10		.411	
SJT14		.326	
SJT16		.393	
SJT17		.395	
SJT22		.400	
SJT23		.407	
SJT27		.430	
SJT29		.353	
SJT31		.402	
SJT35		.440	
SJT67		.340	
SJT18			.359
SJT28			.362
SJT41			.317
SJT51			.478
SJT54			.311
SJT57			.587
SJT63			.536
SJT65			.449
SJT70			.421
SJT74			.375
SJT75			.526
SJT77			.512

Note: Item numbers in the table were classified based on the number assigned to all 80 SJT items initially in the Study 1. The same number is given to each SJT item mentioned in the Appendix A.

with 'Using emotions' factor of MSCEIT (Mayer et al., 2003) and 'Self-management' factor of ECI (Goleman, 1998).

2.2.1.2. Factor 2: Sensing for other's emotion. This factor has 18 items that account one's ability to understand emotion in others. Understanding emotion in others refers to the ability to recognize emotions in others and to adapt accordingly, being empathetic, understanding,

and approachable. This factor has a direct semblance with the ability model of EI, which describes one's ability to understand complex emotions and emotional 'chains' (Salovey & Mayer, 1990). The following is one of the situations, which belongs to this factor:

2.2.1.3. Factor 3: Understanding emotional context. The third factor has 12 items that represent one's ability to understand the context in which emotion is displayed. Such ability is important since understanding the content (emotional display) without the context (the situation) gives away misleading judgment in a social environment. This factor has emerged probably because of the nature of the test (SJT), which offers an opportunity for judgment of emotion against a situation that may or may not be culture specific.

2.2.2. The confirmatory stage

The purpose of confirmatory factor analyses (CFA) was to test factorial validity of the 46-item, three-factor solution of our SJT-based EI measure in the complete sample ($N = 213$). We conducted this CFA using EQS software (Bentler, 1989) with maximum likelihood estimation and using fit indexes recommended by Hu and Bentler (1999) for use with this estimation procedure (i.e., comparative fit index [CFI], root mean square error of approximation [RMSEA], and the standardized root mean residual [SRMR] as well as the chi-square statistics. A χ^2/df value of 2 or less is generally viewed as a good fit (Church & Burke, 1994). According to Kline (2005), model fit is acceptable when CFI is above .90 and SRMR is below .10. Browne and Cudeck (1993) argued that a model shows a close fit if the RMSEA is less than .05 and that 'values up to .08 represent reasonable errors of approximation in the population'. Hu and Bentler (1999) suggest that researchers should use combination of all these fit indices in order to reduce both Type I and Type II errors in covariance structure analyses.

For our CFA model, items were allowed to load only on the factors specified in our exploratory solution with no cross-loadings. Given we used a direct oblimin rotation factor solution in our exploratory analyses; factors in the CFA were specified as correlated. The first factor loading (i.e., reference indicators) on each factor was set to 1.00 for latent variable scaling and statistical identification. All other factor loadings were fixed at zero, with the residuals uncorrelated. The final solution fit indices closely approximated Hu and Bentler's (1999) combinational rules and suggested good fit for the 46-item, three-factor model of the SJT-based EI measure, $\chi^2 (989) = 1366.54$, $p < .001$; $\chi^2/df = 1.382$; CFI = .92; RMSEA = .042; SRMR = .089. Overall, additional support for the three-factor model was achieved from the model fit statistics of the CFA analyses.

2.2.3. Discriminant validity from personality traits

Table 2 shows the correlation between Big Five dimensions with the three factors of 46-item SJT. Except for factor 1 (utilizing own's emotion) of SJT that had very low but significant correlation ($r = -.181$) with agreeableness of Big Five personality dimensions, all other correlations were redundant (see Table 2).

2.2.4. Sex difference

The present finding suggests that women scored higher on all three factors of SJT (indicating higher level of EI) than men. For example, women have higher score ($M = 2.69$, $SD = .26$) on 'utilizing own emotions' dimension of SJT measure than men ($M = 2.44$, $SD = .34$), $F = 11.14$, $df = 1, 211$, $p < .01$. This finding is in congruence with the earlier notions indicating a sex difference in EI.

2.2.5. Reliability

In order to examine the test-retest reliability of the SJT, we requested 28 male and 22 female engineering students, with an average age of 18.56 years, $SD = 7.68$ years, to participate. They completed the test twice, with a 2-week interval between administrations. The test-retest reliability was $r = 0.82$. Further, the internal consistency of all the three factors is above satisfactory level. Factor 1 shows a Cronbach's alpha of .82 of all 16 situations, whereas factor 2 and factor 3 illustrate the reliability of .71. The high reliability coefficients for all the three factors suggest that the test measure is coherent and internally consistent. The overall reliability of the 46 situational judgment-based scale is a Cronbach's alpha of $r = .85$.

3. Study 2: Overview

The primary purpose of Study 2 was to assess the factorial validity of 46-item, three-factor-based SJT measure of EI by conducting CFA again but now using a different sample of full-time management students. Moreover, in this study, we also examined convergent and divergent validity of SJT-based EI measure by correlating the scale with intelligence scales and TEIQue (Petrides et al., 2003).

3.1. Method

3.1.1. Sample and procedure

Participants in Study 2 were 147 management students (93 women and 46 men) from an Indian business school. The mean age was 22.77 ($SD = 6.81$) with a range of 16 and 46 years. The mean education was 16.2 years (range 10–19 years). All participants volunteered for the study and none reported having any emotional disturbance at

Table 2. Intercorrelations (r) between Big Five personality dimensions and factors of situational judgment test of emotional intelligence ($N = 194$)

	Neuroticism	Extraversion	Openness to experience	Agreeableness	Conscientiousness	Utilizing own emotion	Sensing other's emotion	Understanding emotional context
Neuroticism	1							
Extraversion	.257**	1						
Openness to experience	.365**	.447**	1					
Agreeableness	.402**	.354**	.491**	1				
Conscientiousness	.241**	.437**	.481**	.412**	1			
Utilizing own emotion	-.009	-.013	-.002	-.181*	.055	1		
Sensing other's emotion	.043	-.018	.084	-.081	-.067	.359**	1	
Understanding emotional context	-.055	.013	.025	.104	.007	.354**	.284**	1

Note: *Correlation is significant at the 0.05 level (two-tailed). **Correlation is significant at the 0.01 level (two-tailed).

the time of testing. Participants from different educational institutes completed the questionnaire in classroom time (average 1 hour).

3.1.2. Measure

3.1.2.1. Intelligence. The questionnaire for this study included the advanced form of Raven's Progressive Matrices originally developed by Raven and his colleagues (2003). It contains 48 items, presented as one set of 12 (Set I), and another of 36 (Set II). Items are again presented in black ink on a white background, and become increasingly difficult as progress is made through each set. These items are appropriate for adults and adolescents of above-average intelligence. The test was included in order to measure the relationship between intelligence and three factors of the SJT-based EI measure.

3.1.2.2. Trait Emotional Intelligence Questionnaire (TEIQue). The Study 2 questionnaire also included TEIQue to examine the construct validity of the SJT-based EI measure. The TEIQue provides an operationalization for Petrides and colleagues' model that conceptualizes EI in terms of personality (Petrides & Furnham, 2001). The test encompasses 15 subscales organized under four factors: well-being, self-control, emotionality, and sociability. The psychometric properties of the TEIQue were investigated in a study on a French-speaking population (Mikolajczak, Luminet, Leroy, & Roy, 2007). Test developers found TEIQue scores were unrelated to nonverbal reasoning (Raven's Matrices), which they interpreted as support for the personality trait view of EI (as opposed to a form of intelligence; Petrides & Furnham, 2001).

3.2. Results

3.2.1. Confirmatory factor analyses

We again conducted a CFA to test the three-factor solution of the SJT scale using this different sample. We entered the covariance matrix of 46 items into EQS 6.1 (Bentler, 1989). According to Hu and Bentler's (1999) combinational rules of fit indices, CFA analyses revealed good, satisfactory model fit for the proposed 46-item, three-factor model of the SJT-based EI scale, $\chi^2(983) = 1,288$, $p < .001$; $\chi^2/df = 1.31$; CFI = .94, SRMR = .054, RMSEA = .042.

Although we found three different factors in our exploratory analyses and validated our factorial structure using CFA, previous EI research showed that most of EI measures may have hierarchical factor structure (Bar-On, 1997, Palmer, Manocha, Gignac, & Stough, 2003). For example, the dimensional structure of the Bar-On Emotional Quotient Inventory (EQ-i; Bar-On, 1997) represents a hierarchical model of EI describing a general factor, five second-order factors and 15 primary

third-order factors. Therefore, despite having differences in theoretical foundations and empirical findings of the three factors defined previously, our three-factor model may have a general factor of EI. We have examined this by conducting two different CFAs. In the first analysis, we compared one-factor model to three-factor model of the measure to provide further evidence for the best fit of three-factor model. Fit statistics for the one-factor model were as follows: $\chi^2 = 1805.72$, $df = 989$, $\chi^2/df = 1.82$, CFI = .79, SRMR = .091. The results revealed that the three-factor model of the SJT-based EI measure fits the data significantly better than the one-factor model.

Second, CFA analyses were also applied to assess whether the dimensional structure of the present SJT-based EI measure represents a hierarchical model of EI describing a general factor, three second-order factors and 46 items at the third level. More specifically, CFA was applied to assess whether a hierarchical model involving a general factor of EI and the three factors found in exploratory analyses fitted the secondary data. Compared to three-factor model of the SJT measure, hierarchical model with general factor of EI was found to provide a reasonably poor fit with the present dataset ($\chi^2[986] = 1,342$, CFI = .84, SRMR = .082, RMSEA = .12). Based on Hu and Bentler's (1999) combinational rules of fit indices, the three-factor model derived from the exploratory analyses in Study 1 have better fit than the one-factor model and hierarchical model with a general factor of EI. Overall, we conclude that there is sufficient empirical support for the three-factor-based structure of our SJT-based EI measure.

3.2.2. Validation results

Table 3 shows the correlation between TEIQue score, intelligence score, and the three factors of the 46-item SJT. All the three factors of SJT had very low but significant correlation with the TEIQue score. However, nonsignificant correlations are found between intelligence score and three factors of the SJT-based EI measure (see Table 3).

4. Study 3: Overview

The primary purpose of Study 3 was to determine the predictive validity of the SJT-based EI measure. The study examined the relationship of EI with academic achievement and life satisfaction.

4.1. Method

4.1.1. Sample and procedure

Participants in Study 3 were 102 engineering students (77 men and 25 women) from the Indian Institute of Technology (Kharagpur), which is one of the most prestigious engineering institutes in India. The mean age was

Table 3. Factor intercorrelations (*r*) for study 2 (*N* = 147)

	SJT-Utilizing own emotions	SJT-Sensing other's emotions	SJT-Understanding emotional context	Petride trait EI score	Raven's intelligence score	Vocabulary scale
SJT-Utilizing own emotions	1					
SJT-Sensing other's emotions	.466**	1				
SJT-Understanding emotional context	.374**	.302**	1			
Petride trait EI score (TEIQ)	.259**	.195*	.237**	1		
Raven's intelligence score	-.016	-.050	.034	.019	1	
Vocabulary scale	-.126	.089	-.037	.048	-.172*	1

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

Table 4. Factor intercorrelations (*r*) for study 3 (*N* = 102)

	Academic achievements	Life satisfaction	SJT-Utilizing own emotions	SJT-Sensing other's emotions	SJT-Understanding emotional context
Academic achievements	1				
Life satisfaction	0.562*	1			
SJT-Utilizing own emotions	.228*	0.410**	1		
SJT-Sensing other's emotions	.236*	0.272*	.789**	1	
SJT-Understanding emotional context	.204*	0.349**	.635**	.577**	1

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

20.71 (*SD* = 3.81) with a range of 16 and 24 years. Participants were enrolled in different stream of engineering branch, and approximately one third of the participants were first year students.

4.1.2. Measure

4.1.2.1. Academic achievement. Students gave the researchers permission to obtain their grade point averages (GPA; measured on a 10-point scale) in order to assess academic achievement. Both cumulative and current semester GPAs were obtained. GPA for these participants was on a 10-point scale, which is a standard measure in the respective engineering school to measure academic achievement. Since both measures yielded essentially identical results, only the data for cumulative GPA were presented in the results section. In accordance with the predictive design of the study, student's year-end GPA was collected 2 months after the administration of the SJT-based EI measures.

4.1.2.2. Life satisfaction. We used the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) to assess the perceived life satisfaction. It is a 5-item; self-report measure of general life satisfaction. Participants indicate level of agreement with each item on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). Higher scores indicate higher life satisfaction.

4.2. Results

The results provide substantial evidence for the predictive ability of SJT-based EI measure. Table 4 pre-

sents the correlations among all the three factors of SJT-based EI measure, GPA scores, and life satisfaction. The first factor, utilizing own emotions showed a significant correlation with GPA ($r = 0.228$; $p < .05$). In addition, sensing other's emotions and understanding emotions, context dimensions were also significantly correlated with GPA ($r = 0.236$; $p < .05$ and $r = 0.204$; $p < .05$, respectively). Also, as shown in Table 4, the SWLS correlated significantly with all subscales of SJT-based EI measure. All the EI factors were positively associated with SWLS.

5. Discussion

The research described in this paper addresses the development and validation of a SJT of EI. Review of literature suggested that SJTs assess a variety of constructs including general mental ability, emotional stability, conscientiousness, agreeableness, and job experience (Grubb, 2005; McDaniel, Hartman, & Grubb, 2003; McDaniel et al., 2001; McDaniel & Nguyen, 2001; Weekley & Jones, 1999). Grubb (2005) investigated the relationship between EI (used self-report Bar-On EQ-i measures) and SJT, and found significant correlation between the total emotional quotient and the SJT scores. Recent research on EI measurement however showed that there is a need to focus on situational factors if researchers want to predict and increase emotionally intelligent behavior (Ciarrochi & Mayer, 2006; Zeidner, Matthews, & Roberts, 2006).

Taking clues from Grubb (2005) and other studies that used SJT, the present study developed a SJT to

measure EI. Initially, we developed 80 situations based on everyday life experiences of a cross-section of people. A principal components factor analysis of data yielded a three-factor solution of 46 items. These three factors have been labeled as (1) utilizing own emotions, (2) sensing other's emotions, and (3) understanding emotional context.

These three factors contribute to all essential attributes of EI mentioned in the past literature. The factor 'utilizing own emotion' describes the ability of an individual to have perseverance and persuasion skill, whereas the factor 'sensing emotions in others' (see also Salovey & Mayer, 1990) describes the ability to recognize emotions in others and adapt accordingly. These two factors in the present situational judgment-based measure had high congruence with the factors like 'perceptions of emotions' and 'managing emotions' taken from the ability model of Mayer and Salovey (1997, Mayer et al., 2004).

The third factor 'understanding emotional context' refers to an individual's ability to understand the context in which emotion is displayed. More specifically, this attributes help individuals in understanding the situation in which individuals display their emotions. The third factor is unique as so far none of the past EI researchers talked about the importance of understanding the context in which emotions are perceived and displayed in order to have higher EI.

This was striking as past research on emotions illustrated extensively that emotions are context bound (Bonanno et al., 2007; Cole, Michel, & Teti, 1994). In an investigation focused on the autonomic specificity of fear and anger, Stemmler, Heldmann, Pauls, and Scherer (2001) demonstrated that both emotions were exhibited with striking differences when the context was varied from real life to imagined one. Buss, Davidson, Kalin, and Goldsmith (2004) investigated expression of fear across different situations in young children and found that children who demonstrated contextually sensitive responses (i.e., stronger fear reaction to high-threatening conditions, and lower fear reaction to less-threatening conditions) were not at greater risk of later developing psychopathology and behavior disorders.

Some researchers further argued that emotion context sensitivity describes a broad ability and so may encompass individual differences in cognitive processes related to EI (Coifman & Bonanno, 2009). We agree with this and believe that understanding emotional context is a crucial dimension in measuring EI as a construct. People who have higher EI will display higher context-appropriate or context-sensitive emotional responses. Without understanding the contexts (the situations) in which emotions are displayed, individuals can also not utilize their own emotions and also may not be able to recognize emotions in others. The lack of understanding emotional context and displaying context-

inappropriate or context-insensitive responses give away misleading judgment in a social environment and can damage interpersonal relationships. For example, imagine the customers' reaction if a salesperson shows anger to signal his or her discomfort during a buyer-seller interaction. In this context, anger is an inappropriate response and illustrates that the salesperson has low EI. Rather than convincing customers, the display of anger emotions by salespersons in this context might result in ostracizing or withdrawal behavior or even provoke anger from customers.

Findings of the present study provide evidence for construct validity of the SJT-based EI measure. The results of CFA showed that a three-factor solution is the best fit for the scale. Except agreeableness, correlation between the Big Five personality factors and factors of the scale was low and nonsignificant. Agreeableness had significant but low correlation with utilizing own emotion factor of the EI measure. Besides that, none of the EI dimensions of the SJT-based EI measure correlates with intelligence tests. It points out that this measure does not highly correlate with personality and intelligence measures. Many EI researchers have also shown evidence that agreeableness has been the only personality factor that has moderate correlation with EI (e.g., Brackett & Mayer, 2003; Brackett, Mayer, & Warner, 2004; Janovics & Christiansen, 2002). As expected, TEIQue scores were also not highly correlated with nonverbal reasoning (Raven's Progressive Matrices). Thus, the present study also had identical findings with previous research.

All the three factors of the EI measure were significantly correlated with academic achievement and thus the EI measure showed significant predictive validity. That is, individuals who scored higher on different dimensions of EI tended to have higher GPAs. The present study also examined the usefulness of the SJT-based EI measure to predict life satisfaction. We found that all the three factors of the EI measure were positively correlated with life satisfaction. The findings suggest that individuals tend to have higher life satisfaction if they utilize their own feelings and understand other's emotions and the context in which emotions were displayed. These findings are supported by past research showing that EI tends to be associated with academic achievement (Law, Wong, & Song, 2004; Newsome et al., 2000) and life satisfaction (Gignac, 2006; Palmer, Donaldson, & Stough, 2002). Overall, higher scores in all the three dimensions of the SJT-based measure illustrate that the individual has the skill to manage stress and the orientation of emotions for success in different life situations.

Although all three factors of the SJT-based measure have not shown high correlation with Petrides trait EI score, this finding is not unlikely for two reasons. First, many researchers have questioned the construct validity

of SJTs because of its characteristics (Sternberg, Wagner, & Okagaki, 1993). These characteristics include the degree of fidelity of the SJT, the contextual complexity of the items, the content of the scenario, and the response instructions (McDaniel & Nguyen, 2001).

Second, recently, Lievens and Sackett (2007) have questioned whether SJTs developed in one culture can be transported in another culture because of cultural specificity of situations.

Although researchers have critically examined the cultural transportability of SJT items and found for some situations related to emotions like situations of joy, shame, anger, fear, sadness, and disgust (Scherer & Wallbott, 1994; Scherer, Wallbott, & Summerfield, 1986), still such basic configurations used in those studies are different from the situations used in the present EI-related SJT. Many of them have daily-life-related situations and response options, which might not be generalized across culture. Some situations and response alternatives, which are very relevant in India, might not be relevant in Western cultures. While the present study has used India-specific situations and response alternative to measure EI, TEIQue has measured EI with items developed in the United Kingdom with Likert scale response pattern. Therefore, cultural specificity of situations and different way of measuring EI could be other reasons behind poor relationship found in the present study between the SJT-based EI and TEIQue. Put in other words, while the context (situation) differs from culture to culture, the content (emotion) may be universal. Therefore, it is difficult to have direct parallel of SJT-based EI, resulting in low correlations with the factor structure of trait-based EI score developed in a different culture (e.g., Petrides et al., 2003).

Despite the fact that SJT methodology seemed a good choice in our attempt to develop and validate the EI test, there was one major concern related to situational judgment-based measures – fakability or influence of social desirability factors. According to McDaniel et al. (2007), SJTs with knowledge instructions are maximal performance assessments, saturated with cognitive variance, and likely not affected by individual differences in tendencies toward self-deception and impression management. In contrast, SJTs with behavioral tendency instructions are typical performance assessments, saturated with noncognitive variance and subject to error associated with tendencies toward self-deception and impression management. Grubb and McDaniel (2007) ascertains that since the mixed model contains noncognitive dimensions and because it is a self-report measure, the mixed-model instruments would be more vulnerable to faking similar to the fakability of personality measures as discussed by Viswesvaran and Ones (1999).

However, as opposed to the extensive research on the fakability of personality, biodata, and integrity tests,

no published studies have examined whether people can intentionally distort their responses on SJTs (Peeters & Lievens, 2005). It is true that a limited number of conference presentations (Haas & McDaniel, 1999; Juraska & Drasgow, 2001; Nguyen, McDaniel, & Biderman, 2002) have examined whether individuals are able to fake SJTs when instructed to do so. However, these studies' results are mixed, with some showing that SJTs can be faked (Haas & McDaniel, 1999; Nguyen et al., 2002), while others (Juraska & Drasgow, 2001) drawing the opposite conclusion. Nguyen et al. (2002) posited that these mixed results regarding the fakability of SJTs might result from the types of response instructions used (see also Ployhart & Ehrhart, 2001). Nguyen et al. (2002) found that SJTs were more resistant to faking when respondents were asked to indicate the best and the worst responses (i.e., the knowledge condition) than when they were asked to indicate the most and the least likely responses (i.e., the behavioral tendency condition). The second related explanation might be that faking depends on the constructs measured by the SJT. For example, Juraska and Drasgow (2001) suggested that the constructs assessed in an SJT could influence the level of fakability because some constructs are more faked than others. The general idea is that an SJT is less faked when it is 'g-loaded' (Nguyen et al., 2002). Conversely, it is more faked when it correlates more strongly with personality traits. Since our test was constructed based on both the ability and mixed model of EI, and the emerging factor structure would throw light on whether EI is a cognitive or noncognitive construct or both, it was best to postpone the study of fakability in our future research.

In sum, the aim of the present study was to develop and validate SJT-based EI measure. The findings indicated that the 46-item SJT is a reliable and distinct measure for the assessment of EI. Furthermore, findings of confirmatory factor analysis using secondary dataset suggest that the three-factor model is the best solution for the measure. The findings also suggest that this SJT-based EI measure is distinct from personality and intelligence measures. Poor correlations between the measure and TEIQ could limit the validation of this measure for practical use as of now. However, as explained, this weak validation results might be due to cultural specificity of situations and of response patterns or because of SJT characteristics.

We conclude that unlike self-report measures of EI, SJT can comprehensively measure some major aspects of EI and elicits response options that are representative of real-life situations involving understanding, experience, and expression of emotion, and more importantly utilization of emotions in different situations. Although the present measure has drawn real-life situations from a specific cultural context, it does not restrict the scope for establishing the construct of EI.

The present study is rudimentary in nature and provides direction for the future development of pan-culturally stable and valid SJT-based EI measure.

References

- Ackerman, P. L., & Heggestad, E. D. (1997). Intelligence, personality and interests: Evidence for overlapping traits. *Psychological Bulletin*, 121, 219–245.
- Bar-On, R. (1997). *Bar-On Emotional Quotient Inventory (EQ-i): A test of emotional intelligence*. Toronto, Canada: Multi-Health Systems.
- Bar-On, R., & Parker, J. D. (2000). *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace*. San Francisco: Jossey-Bass.
- Bentler, P. M. (1989). *EQS: A structural equations program manual*. Los Angeles: BMDP Statistical Software Inc.
- Bentler, P. M., & Yuan, K.-H. (1998). Tests for linear trend in the smallest eigenvalues of the correlation matrix. *Psychometrika*, 63, 131–144.
- Bjorklund, D. F., & Kipp, K. (1996). Parental investment theory and gender differences in the evolution of inhibition mechanisms. *Psychological Bulletin*, 120, 163–188.
- Bonanno, G. A., Colak, D. M., Keltner, D., Shiota, M. N., Papa, A., Noll, J. G., Putnam, F. W., & Trickett, P. K. (2007). Context matters: The benefits and costs of expressing positive emotion among survivors of childhood sexual abuse. *Emotion*, 7, 824–837.
- Boyatzis, R. E., Goleman, D., & Rhee, K. (1999). Clustering competence in emotional intelligence: Insights from the Emotional Competence Inventory (ECI). In R. Bar-On & J. D. Parker (Eds.), *Handbook of emotional intelligence* (pp. 343–362). San Francisco: Jossey-Bass.
- Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of EI. *Personality and Social Psychology Bulletin*, 29, 1147–1158.
- Brackett, M. A., Mayer, J. D., & Warner, R. M. (2004). Emotional intelligence and its relation to everyday behaviour. *Personality & Individual Differences*, 36, 1387–1402.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Beverly Hills, CA: Sage.
- Buss, K. A., Davidson, R. J., Kalin, N. H., & Goldsmith, H. H. (2004). Context-specific freezing and associated physiological reactivity as a dysregulated fear response. *Developmental Psychology*, 40, 583–594.
- Chan, D., & Schmitt, N. (2002). Situational judgment and job performance. *Human Performance*, 15, 233–254.
- Church, A. T., & Burke, P. J. (1994). Exploratory and confirmatory tests of the Big Five and Tellegen's three- and four-dimensional models. *Journal of Personality and Social Psychology*, 66, 93–114.
- Ciarrochi, J., & Mayer, J. D. (2006). A Conversation on 'Can Self-Report Measures Contribute to the study of Emotional Intelligence?' Available at http://www.unh.edu/emotional_intelligence/ (accessed 31 January 2006).
- Clevenger, J., Pereira, G. M., Wiechmann, D., Schmitt, N., & Schmidt-Harvey, V. S. (2001). Incremental validity of situational judgment tests. *Journal of Applied Psychology*, 86, 410–417.
- Coifman, K. G., & Bonanno, G. A. (2009). Emotion context sensitivity in adaptation and recovery. In A. Kring & D. M. Sloan (Eds.), *Emotion regulation and psychotherapy* (pp. 157–173). New York: Guilford.
- Cole, P. M., Michel, M. K., & Teti, L. O. (1994). The development of emotion regulation and dysregulation: A clinical perspective. *Monographs of the Society for Research in Child Development*, 59, 73–100.
- Cooper, R., & Ayman, S. (1997). *Executive EQ: Emotional intelligence in leadership and organizations*. London: Orion Books.
- Costa, P. T., & McCrae, R. R. (1992). *Revised personality inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI): Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Daus, C. S., & Ashkanasy, N. M. (2003). Will the real emotional intelligence please stand up? On deconstructing the emotional intelligence 'debate'. *The Industrial-Organizational Psychologist*, 41, 69–72.
- Davies, M., Stankov, L., & Roberts, R. D. (1998). Emotional intelligence: In search of an elusive construct. *Journal of Personality and Social Psychology*, 75, 989–1015.
- Dawda, D., & Hart, S. D. (2000). Assessing emotional intelligence: Reliability and validity of the Bar-On Emotional Quotient Inventory (EQ-i) in university students. *Personality and Individual Differences*, 28, 797–812.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality and Social Psychology*, 69, 71–75.
- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 41, 417–440.
- Freudenthaler, H. H., & Neubauer, A. C. (2003). *The Localization of Emotional Intelligence within Human Abilities and Personality*. Poster presented at the 11th Biennial Meeting of the International Society for the Study of the Individual Differences (ISSID), Graz, Austria. July.
- Gignac, G. E. (2006). Self report emotional intelligence and life satisfaction: Testing incremental predictive validity hypotheses via structural equation modeling (SEM) in a small sample. *Personality and Individual Differences*, 40, 1569–1577.
- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.
- Goleman, D. (1998). *Working with emotional intelligence*. New York: Bantam.
- Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Grubb, W. L., III (2005). *The Emotional Side of a Situational Judgement Test*. From online journal 'Business Quest'. Available at westga.edu/~bquest/2005/emotional (accessed 30 January 2006).
- Grubb, W. L., & McDaniel, M. A. (2007). The fakability of Bar-On's emotional quotient inventory short Form: Catch me if you can. *Human Performance*, 20, 43–59.
- Haas, A., & McDaniel, M. A. (1999). *Faking Strategies: Effects on a situational judgment test*. Paper presented at the 14th annual conference of the Society for Industrial and Organizational Psychology, Atlanta, GA. April.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.

- Janovics, J., & Christiansen, N. D. (2002). *Emotional Intelligence in the Workplace*. Paper presented at the 16th annual conference of the Society for Industrial and Organizational Psychology, San Diego, CA, May.
- Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology*, 95, 54–78.
- Juraska, S. E., & Drasgow, F. (2001). *Faking situational judgment: A test of the Conflict Resolution Skills Assessment*. Paper presented at the 16th annual conference of the Society for Industrial and Organizational Psychology, San Diego, CA, April.
- Kline, P. (1994). *An easy guide to factor analysis*. New York: Routledge.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford.
- Knapp, D. J., Campbell, C. H., Borman, W. C., Pulakos, E. D., & Hanson, M. A. (2001). Performance assessment for a population of jobs. In J. P. Campbell & D. J. Knapp (Eds.), *Exploring the limits in personnel selection and classification* (pp. 181–235). Mahwah, NJ: Lawrence Erlbaum Associates.
- Law, K. S., Wong, C. S., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology*, 89, 483–496.
- Lievens, F., & Chan, D. (2010). Practical intelligence, emotional intelligence, and social intelligence. In J. L. Farr & N. T. Tippins (Eds.), *Handbook of employee selection* (pp. 339–360). New York: Lawrence Erlbaum/Taylor & Francis.
- Lievens, F., & Sackett, P. R. (2007). Situational judgment tests in high stakes settings: Issues and strategies with generating alternate forms. *Journal of Applied Psychology*, 92, 1043–1055.
- MacCann, C., Wang, L., Matthews, G., & Roberts, R. D. (2010). Emotional intelligence and the eye of the beholder: Comparing self- and parent-rated situational judgments in adolescents. *Journal of Research in Personality*, 44, 673–676.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27, 267–298.
- Mayer, J. D., & Geher, G. (1996). Emotional intelligence and the identification of emotion. *Intelligence*, 22, 89–113.
- Mayer, J. D., & Salovey, P. (1997). What is emotional. In I. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence: Implications for educators* (pp. 3–31). New York: Basic Books.
- Mayer, J. D., Salovey, P., & Caruso, D. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15, 197–215.
- Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2003). Measuring emotional intelligence with the MSCEIT V2.0. *Emotion*, 3, 97–105.
- McDaniel, M. A., Hartman, N. S., & Grubb, W. L., III (2003). *Situational Judgement Tests, Knowledge, Behavioural Tendency, and Validity: A meta-analysis*. Paper presented at the 18th Annual Conference of the Society for Industrial and Organizational Psychology, Orlando.
- McDaniel, M. A., Hartman, N. S., Whetzel, D. L., & Grubb, W. L. (2007). Situational judgment tests, response instructions, and validity: A meta-analysis. *Personnel Psychology*, 60, 63–91.
- McDaniel, M. A., Morgeson, F. P., Finnegan, E. B., Campion, M. A., & Braverman, E. P. (2001). Predicting job performance using situational judgement test: A clarification of the literature. *Journal of Applied Psychology*, 86, 730–740.
- McDaniel, M. A., & Nguyen, N. T. (2001). Situational judgement tests: A review of practice and constructs assessed. *International Journal of Selection and Assessment*, 9, 103–113.
- Mikolajczak, M., Luminet, O., Leroy, C., & Roy, E. (2007). Psychometric properties of the Trait Emotional Intelligence Questionnaire: Factor structure, reliability, construct, and incremental validity in a French-speaking population. *Journal of Personality Assessment*, 88, 338–353.
- Motowidlo, S. J., Dunnette, M. D., & Carter, G. W. (1990). An alternative selection procedures: The low fidelity simulation. *Journal of Applied Psychology*, 75, 640–647.
- Motowidlo, S. J., & Tippins, N. (1993). Further studies of the low-fidelity simulation in the form of situational inventory. *Journal of Occupational and Organizational Psychology*, 66, 337–344.
- Newsome, S., Day, A. L., & Catano, V. M. (2000). Assessing the predictive validity of emotional intelligence. *Personality and Individual Differences*, 29, 1005–1016.
- Nguyen, N. T., McDaniel, M. A., & Biderman, M. D. (2002). *Response Instructions in Situational Judgment Tests: Effects on faking and construct validity*. Paper presented at the 17th annual conference of the Society for Industrial and Organizational Psychology, Toronto, Canada.
- Olson-Buchanan, J. B., Drasgow, F., Moberg, P. J., Mead, A. D., Keenan, P. A., & Donovan, M. (1998). Interactive video assessment of conflict resolution skills. *Personnel Psychology*, 51, 1–24.
- Palmer, B. R., Donaldson, C., & Stough, C. (2002). Emotional intelligence and life satisfaction. *Personality and Individual Differences*, 33, 1091–1100.
- Palmer, B. R., Manocha, R., Gignac, G., & Stough, C. (2003). Examining the factor structure of the Bar-On Emotional Quotient Inventory with an Australian general population sample. *Personality and Individual Differences*, 35, 1191–1210.
- Peeters, H., & Lievens, F. (2005). Situational judgment tests and their predictiveness of college students' success: The influence of faking. *Educational and Psychological Measurement*, 65, 70–89.
- Perez, J. C., Petrides, K. V., & Furnham, A. (2005). Measuring trait emotional intelligence. In R. Schulze & R. D. Roberts (Eds.), *Emotional intelligence: An international handbook* (pp. 181–201). Ashland, OH: Hogrefe & Huber.
- Petrides, K. V., & Furnham, A. (2000a). Gender differences in measured and self-estimated trait emotional intelligence. *Sex Roles*, 42, 449–461.
- Petrides, K. V., & Furnham, A. (2000b). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, 29, 313–320.
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality*, 15, 425–448.
- Petrides, K. V., Perez, J. C., & Furnham, A. (2003). *The Trait Emotional Intelligence: Questionnaire (TEIQue): A measure of emotional self-efficacy*. Paper presented at the 11th Biennial Meeting of the International Society for the Study of the Individual Differences (ISSID), Graz, Austria.

- Ployhart, R. E., & Ehrhart, M. G. (2001). *Effects of Response Instructions on the Criterion Related Validity, Construct Validity, and Reliability of Situational Judgment Tests*. Paper presented at the 16th Annual Conference of the Society for Industrial and Organizational Psychology, San Diego, CA, April.
- Raven, J., Raven, J. C., & Court, J. H. (2003). *Manual for Raven's progressive matrices and vocabulary scales*. San Antonio, TX: Harcourt Assessment.
- Reise, S. P., Waller, N. G., & Comrey, A. L. (2000). Factor analysis and scale revision. *Psychological Assessment*, 12, 287–297.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185–211.
- Salovey, P., Mayer, J. D., Goldman, S., Turvey, C., & Palfai, T. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (Ed.), *Emotion, disclosure, and health* (pp. 125–154). Washington, DC: American Psychological Association.
- Scherer, K. R., & Wallbott, H. G. (1994). Evidence for universality and cultural variation of differential emotion response patterning. *Journal of Personality and Social Psychology*, 66, 310–328.
- Scherer, K. R., Wallbott, H. G., & Summerfield, A. B. (1986). *Experiencing emotion: A crosscultural study*. Cambridge: Cambridge University Press.
- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25, 167–177.
- Stemmler, G., Heldmann, M., Pauls, C. A., & Scherer, T. (2001). Constraints for emotion specificity in fear and anger: The context counts. *Psychophysiology*, 38, 275–291.
- Sternberg, R. J., Wagner, R. K., & Okagaki, L. (1993). *Practical intelligence: The nature and role of tacit knowledge in work and at school*. New Haven, CT: Yale University.
- Van Rooy, D. L., Viswesvaran, C., & Pluta, P. (2005). An evaluation of construct validity: What is this thing called emotional intelligence? *Human Performance*, 18, 445–462.
- Viswesvaran, C., & Ones, D. S. (1999). Meta-analyses of fakability estimates: Implications for personality measurement. *Educational and Psychological Measurement*, 59, 197–210.
- Weekley, J. A., & Jones, C. (1999). Further studies of situational tests. *Personnel Psychology*, 52, 679–700.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2006). Emotional intelligence, adaptation, and coping. In J. F. J. Ciarrochi & J. D. Mayer (Eds.), *Emotional intelligence in everyday life: A scientific inquiry* (2nd ed., pp. 100–125). Philadelphia, PA: Psychology Press.

Appendix A. 46 Items situational judgment-based emotional intelligence measure

The following 46 sentences depict various life situations and are followed by three multiple choices. Participants need to mark their 'most preferred' and 'least preferred' answer.

Factor 1: Utilizing own emotion. The following 16 items belong to factor 1 of the SJT measure that captures how one utilizes his/her own emotions.

SJT	Item	Most preferred (3)	Least preferred (1)
SJT 37	You are a doctor, and you do not agree with your superior regarding his suggestions for one patient's treatment. You are upset and angry a. You will even not try to convince your superior doctor and leave job and will not treat the patient. b. Will control your emotions and treat patient by the way your superior told. c. You firstly talk with your superior and try and convince him on your suggestions and then treat the patient.		
SJT 42	You and your friend work on the summer project together. However, because of sore throat, your friend is not able to make the presentation along with you. You a. Feel very angry with your friend for doing the presentation all alone. b. Realize that it is the best way for the time being. c. Feel bad about not being able to make the presentation but help your friend despite it in future.	Most preferred (3)	Least preferred (1)
SJT 43	You really want to go to your friend's house-warming party but have loads of important meetings to attend and work to do in office. You a. Feel bad about having so much work and not being able to go. b. You prioritize your work in such a way that you can make it for the party. c. You finish all your work and telephone your friend to explain why you cannot make it.	Most preferred (3)	Least preferred (1)
SJT 46	When I make new friends with people that I really like; I find out that I like them for who they are but they tell me that it would be better if I changed some of my hobbies/habits. I like the hobbies/habits. a. I change myself to fit their needs. b. I get angry and leave immediately. c. I decide that it is not worth changing yourself and your likes and dislikes to impress someone. I try to explain that and if it does not work, I leave.	Most preferred (3)	Least preferred (1)

Factor 1: Continued

SJT 47	There is a situation that has gotten complicated. You know that if you really try, you can solve the problem. a. You do not want to spend energy solving this problem when you think that you can turn your back on it and avoid it. b. You make use of your abilities to the most and try your best to solve the problem. c. You do not care, you think that destiny will work the problem out.	Most preferred (3)	Least preferred (1)
SJT 49	You have only 30 minutes to finish an examination and two long answers to attempt. You a. Become nervous and decide to write only 1 answer completely. b. You try and focus more on the questions and try to attempt both. c. You are unable to focus and find it difficult to continue the paper.	Most preferred (3)	Least preferred (1)
SJT 53	The work team is making a very important decision regarding the project. This affects every single member of the team. You do not agree with the decision that they came up with. You ... a. Keep quiet because you do not feel comfortable speaking against the crowd. b. You speak up about your belief and try to convince them to change their minds or negotiate. c. You think it will be useless to speak up against the crowd so you leave the team.	Most preferred (3)	Least preferred (1)
SJT 55	One of your friend's parents is very conservative and not willing to let your friend pursue higher studies. You a. Feel parents know the best for their children and do not speak to your friend's parents about letting her study further. b. Try and talk to the parents to let your friend study more and fulfill her dreams. c. Persuade her parents to let her study more by giving examples of how it could be beneficial to her and her parents.	Most preferred (3)	Least preferred (1)
SJT 58	You are going to attend your friend's party. As you enter, you see unfamiliar faces. Your friend introduces you to the people. You ... a. Say hi and then go and stand in one corner. b. You start a conversation that is negative and boring. c. You use your outgoing personality and spark an interesting conversation.	Most preferred (3)	Least preferred (1)
SJT 60	You notice your friend pick up something from a shop and sneak it inside his pocket without paying the shopkeeper for it. You will: a. Confront your friend in the shop itself and ask him whether he has forgotten to pay for it b. Excuse your friend thinking he is a kleptomaniac and confront him later. c. Ask your friend politely if he did it by mistake and speak to him later about it.	Most preferred (3)	Least preferred (1)
SJT 64	You just got a lot of criticism on your work. You ... a. Ignore the comments. b. Get stressed out about comments. c. Think rationally and have a balanced reaction.	Most preferred (3)	Least preferred (1)
SJT 66	You fall sick before your final exams and your chances of doing very well and your long cherished dream of coming first in the class seems highly unlikely. Parents tell you to take it easy and not bother much. You a. Realize it is impossible to study and do well in these circumstances. b. Still do not give up on your dream and keep working hard. c. Give up on your dream and focus on recovering soon.	Most preferred (3)	Least preferred (1)
SJT 69	Even though your friend asks you to believe a certain person, You a. Do not think it will be wise to do so. b. Believe it is nice to trust people and will trust. c. Wait for some more people's view on that person before trusting him or her.	Most preferred (3)	Least preferred (1)
SJT 71	In a car race which you are nearly winning, you are overtaken by another car just before the finishing line, you a. Loose hope and give up as time is too less. b. Try your all to win despite this. c. Feel should give others a chance too as you had won last year either ways.	Most preferred (3)	Least preferred (1)
SJT 76	You are appointed the cheerleader of your team when suddenly the former falls sick, You a. Do not think it will be nice to step into your cheerleader's shoes. b. Make use of this opportunity to motivate your team. c. Are unsure of how to deal with the situation.	Most preferred (3)	Least preferred (1)
SJT 79	You do not agree with your father's decision about going to a late night party. You a. Try and explain to him that you are big enough to make your own decisions. b. Try and discuss with him why should be allowed to go and then respect his decision whatever it is. c. Agree with him and sneak out secretly without him knowing and getting hurt.	Most preferred (3)	Least preferred (1)

Factor 2: Sensing other's emotion. The following 18 items belong to factor 2 of the SJT measure that account one's ability to understand emotion in others.

SJT 2	You and Sanjay both are not good friends anymore. Sanjay's father is very rich and you think he is very proud of that. Suddenly, you get the news that Sanjay's father lost his money and became bankrupt. Your friends are upset, as Sanjay will not be able to continue his education. You a. Will also feel upset and try to help him. b. Feel indifferent. c. Do not know what to do.	Most preferred (3)	Least preferred (1)
SJT 3	You are working in office and your boss is very punctual with time. You came very late for a very important meeting and your boss does not mention anything about it. You a. Understand that he might be disappointed and apologize to him. b. Do not realize that since he does not mention anything. c. Do not realize his feeling and start working.	Most preferred (3)	Least preferred (1)
SJT 4	You organize a party and invite your close friends. Suddenly, one of your close friends is upset over a call, but he does not tell you why. You a. Understand by his facial expression or voice that he is unhappy. b. You cannot understand by his facial expression unless he tells about it. c. You do not concentrate on facial expressions of others when you enjoy party.	Most preferred (3)	Least preferred (1)
SJT 5	You are going for morning walk when suddenly you see a car hit a boy at the road, you a. Become very angry and start scolding the car driver. b. Become very angry and control your emotions and help the child to go to hospital. c. You will avoid having negative emotions like anger, be calm and just help the child go to hospital.	Most preferred (3)	Least preferred (1)
SJT 6	You want to go for higher education abroad but your parents do not want that you should go abroad but they do not tell you. You can a. Understand their dissatisfaction by their nonverbal messages and will try to convince them. b. Cannot understand their facial expression and will think that they are fine with this decision. c. Do not care about your parent's emotion and will go abroad without convincing them.	Most preferred (3)	Least preferred (1)
SJT 7	You are hostel chairman and are managing all activities in your hostel. But your hostel counsel members are not satisfied with your decisions and want that you should resign from your post. You do not know about it. They are discussing it in a close door meeting when you suddenly enter it, a. You can make some guess about this feeling by just watching their facial expressions. b. Can not understand their facial expressions that they are not satisfied with your work unless tell you. c. Will not concentrate on their facial expressions and start your work.	Most preferred (3)	Least preferred (1)
SJT 8	You want to organize picnic with your classmates but some of your classmates oppose it and they do not want to spend money, you a. Do not like to talk with the classmates who oppose you and just go for picnic with others. b. Will talk with the people who oppose and try to convince them. c. You will not like to talk with those students but tell your friends and other colleague to talk with them.	Most preferred (3)	Least preferred (1)
SJT 10	You are a minister and have the responsibility to take decisions on public affairs you will a. Take decisions by your own without considering public feelings and even other politicians feeling. b. Take decisions after discussions with only your followers. c. Will take decisions after discussions with public representatives.	Most preferred (3)	Least preferred (1)
SJT 14	When you give suggestions for any problem in your family, work group, or during friends meetings a. People listen to you carefully and accept your suggestions. b. Do not listen much and most of the time ignore your suggestions. c. Sometimes, they listen and accept but sometimes they do not.	Most Preferred (3)	Least Preferred (1)
SJT 16	When you go to a slum, you see some children who cannot go to school because of poverty a. You will feel sad and you can experience it and try to help them. b. You are not aware of your emotions when you see them, but will try to help them. c. You feel indifferent and just think that you cannot help them.	Most preferred (3)	Least preferred (1)
SJT 17	You plan to go for cinema with your friend. Although he has some work, he hesitates to tell you no, you can a. Understand that he is not willing to go by watching his facial expressions. b. Cannot understand until he tells you in verbally. c. You do not pay attention to his facial expressions and will go for cinema as planned.	Most preferred (3)	Least preferred (1)

Factor 2: Continued

SJT 22	You love one of your college mates and want to marry her but suddenly she tells you that she does not love you and is going to marry one of your close friends a. You will feel depressed and do not have control on your emotions. b. Will feel sad for some time but after that you will be able to manage your emotions, as you will take it as part of life. c. You will loose your feelings for everybody and get mentally upset.	Most preferred (3)	Least preferred (1)
SJT 23	You are a college student and have problems in one subject during exam times. You a. Will ask your doubts to your professor without any hesitation. b. You will hesitate and after taking some time, you will ask your doubts from your friends but not from professors. c. Do not ask to any one and try to solve your doubts by yourself.	Most preferred (3)	Least preferred (1)
SJT 27	You have a crucial time for study as you have entrance exam for IIT but you spend time for sports and other activities. As a result, you are not able to qualify and feel upset, you a. Can distinguish that what is important at particular time and will not repeat mistakes like that. b. Take it just a chance and luck, and do not learn a lesson from the mistakes. c. Cannot distinguish that what is important and what is not.	Most preferred (3)	Least preferred (1)
SJT 29	You are going for your first interview by taxi, when suddenly there is an uproar, which creates problems and a traffic jam. You became angry and get anxious. You a. Will try to control your anxiety and to become calm and request the taxi drivers to stop their quarrel politely and try to solve their problem. b. Cannot control your anxiety and think that cant reach the interview place at right time get very upset and return back to home. c. Difficult to control and start fighting with them.	Most preferred (3)	Least preferred (1)
SJT 31	You are a software professional, you get an assignment with three other colleagues but they usually do not agree with your views, for you a. It is difficult to talk with them. b. Can manage your feelings and are able to talk with them and try to convince them. c. You do not care for their views and do not even try to talk with them, and go with your own ideas and views.	Most preferred (3)	Least preferred (1)
SJT 35	You join new job where people are not so friendly and social, they do not talk much and are more individualistic. You can a. Adjust there very easily and can able to manage with people and make relations very fast. b. Cannot adjust and leave job soon. c. Will take lot of time to manage your self in this situation.	Most preferred (3)	Least preferred (1)
SJT 67	While traveling with friends for a picnic, your car runs out of fuel. You decide to ask the others to wait while you borrow a vehicle and get some fuel, which would take the car until the nearest gas station. However, one friend has another suggestion a. You discard the view because it does not sound logical to you. b. Takes a majority poll and do accordingly. c. Bring it to others notice that it is your car so they should say as you suggest.	Most Preferred (3)	Least Preferred (1)

Factor 3: Understanding emotional context. The following 12 items belong to factor 3 of the SJT measure that represent one's ability to understand the context in which emotion is displayed.

SJT 18	You prepare for one competition and work hard but in the exam, you could not perform your best of ability. Results come and you get ranked among the top 100, which is very commendable, you a. Are surprised and happy and enjoy your success with your family. b. Do not know what you will feel but enjoy your success with your family. c. Do not know what you will feel and do not want too as you do not take it as big success.	Most preferred (3)	Least preferred (1)
SJT 28	When I'm able to motivate myself out of the low feelings, a. I am usually very creative. b. Unable to concentrate. c. There is hardly any difference.	Most preferred (3)	Least preferred (1)
SJT 41	While formulating your plans for the future, a. You try and visualize the future to help you get more clarity on where you want to go or what you want to do. b. Feel very anxious about how to go about the plans. c. You just listen to the advice of your seniors and elders.	Most preferred (3)	Least preferred (1)
SJT 51	Hate the sin and not the sinner. You a. Agree with the proverb fully. b. Think the sinner is equally at fault irrespective of the circumstances. c. Are unsure.	Most preferred (3)	Least preferred (1)
SJT 54	You just completed the project and presented it. You do not really know if people liked your performance. You ... a. Ask for their comments and criticism regarding the project. b. Do not ask for their comments and criticism because you are confident that you did the job well. c. Do not ask for their criticism because you have trouble taking constructive criticism.	Most preferred (3)	Least preferred (1)
SJT 57	Life is really stressing you out right now. You have a client who is unhappy with your work and your boss is on the verge of firing you if you do not handle the situation effectively. You ... a. Remain calm and work toward success. b. You make a witty excuse and weasel your way out of the situation. c. You get nervous and mess things up.	Most preferred (3)	Least preferred (1)
SJT 63	You just had a major argument with a loved one. You both say that you are not in a state to compromise and stop talking to each other. You later on cool down and think about the situation. You ... a. Think about the circumstances that the other person was in and try to relate to him. b. Think about how you were right and that there is no way that the other person can be right. c. You just wait for the other person to come and apologize.	Most preferred (3)	Least preferred (1)
SJT 65	Whatever happens happens for the best. You think this statement a. Is true. b. Is false. c. Are uncertain.	Most preferred (3)	Least preferred (1)
SJT 70	While traveling, you a. Talk to fellow passengers and tell them about you. b. Do not like socializing and keep to yourself. c. Get your seat changed to some other seat where you can read your book and do your own stuff.	Most preferred (3)	Least preferred (1)
SJT 74	While traveling in a train, a fellow passenger requests you to let him use your cellphone for an urgent work. You a. Want to help him and let him do that. b. Feel uncomfortable about letting a stranger phone and make an excuse. c. Ignore the request.	Most preferred (3)	Least preferred (1)
SJT 75	There is a discussion on the topic of poverty and starvation around the world. Your stand is a. I really care about this topic and wish that things improved. I also volunteer for community service. b. As long as I have money and food to eat, I do not feel like taking the headache for someone else's problem. c. I care but do not volunteer or take any actions to solve the problem.	Most preferred (3)	Least preferred (1)
SJT 77	During your free time ... a. You are mostly out and socializing with people. b. You are inside my house or roaming around by myself. c. You figure out ways of avoiding people.	Most preferred (3)	Least preferred (1)

Note: The scale and scoring key of the SJT measure is freely available for research purpose and can be obtained by contacting the first author.