

Report on the Validation of the Emotionally Intelligent Leadership for Students Inventory

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Abstract

The present study was designed to examine the measurement of the Emotionally Intelligent Leadership (EIL) construct and to provide evidence of validation for the multidimensional Emotionally Intelligence Leadership for Students: Inventory 2.0 (EILS:I 2.0). The EILS:I 2.0 is a self-report assessment of emotionally intelligent leadership in the context of a student environment. The results of two confirmatory factor analyses of two independent samples of data from students across the United States provide support for a 19-factor model of EIL and the construct validity of the EILS:I 2.0. These results provide leadership educators evidence that use of the EILS:I 2.0 will result in the measurement of 19 capacities of EIL in students. Implications of these findings for leadership educators and directions for future research are discussed.

Introduction

The collegiate context provides a wonderful “practice field” for leadership. In recent years, a number of models have emerged (e.g., Komives, Lucas, & McMahon, 2013; Kouzes & Posner, 2014; Shankman, Allen, & Haber-Curran, 2015a) to help students and educators explore leadership. While a number of books and articles designed specially for student leaders have emerged, a limited number of assessments and inventories (Posner, 2010; Slack, 2006) designed to aid in student learning about the topic of leadership are available. Of the assessments that already exist, few are situated in the context of students and often assume a corporate setting (e.g., Bass & Avolio, 2000) or formal authority relationships (e.g., boss/subordinate) (e.g., Graen, Novak, & Sommerkamp, 1982). A few examples of assessments that are designed for student settings include the ESCI-U (Hay Group, 2015), Socially Responsible Leadership Scale (Slack, 2006) and the Student Leadership Practices Inventory (SLPI) (Posner, 2010).

Similar to the purpose of the original work of Shankman and Allen (2008) our goal in developing the Emotionally Intelligent Leadership for Students: Inventory 2.0 (EILS:I 2.0) (Shankman, Allen, & Miguel, 2015b) was to construct a leadership assessment and learning tool situated in the context of students – high school, college/university, graduate school. Likewise, we wanted to design a tool that was user friendly, an appropriate length, and displayed adequate psychometric properties. We have found this work to be challenging, exhilarating, frustrating

and perhaps most important, humbling. As any scholar will attest, our efforts are a continual work in progress, but we are excited to report on our efforts to date.

Validation is the most fundamental issue regarding the development and use of any assessment instrument, whether it is used for educational, psychological, or organizational purposes (Chan, 2014). Validity reflects the quality of the decisions made from the results of an assessment (Chan, 2014). The process of validation serves to collect evidence to support the validity of an instrument. This evidence demonstrates the ability of the instrument to measure the constructs it is designed to measure for practical and research purposes. The purpose of this paper is to report on the results of our validation study investigating the construct-related validity of the EILS:I 2.0 (Shankman et al., 2015b). Our research has been conducted in accordance with professional standards and best practices in validation (e.g., AERA, APA, NCME, 1999, 2014). We begin by sharing the current model of emotionally intelligent leadership (EIL) (Shankman et al., 2015a). The model is based on the theoretical work described in Allen, Shankman, and Miguel (2012) and has been adapted based on the results of the present research. We continue with a discussion of the scale development process for the EILS:I 2.0, which was consistent with a content validation approach. Next, we describe and report on the results of two confirmatory factor analyses (CFA) designed to establish evidence for the reliability and construct-related validity of the EILS:I 2.0. The purpose of the first study was to test how well the variables measured by the EILS:I 2.0 fit the structure of the proposed model. The purpose of the second study was to cross-validate the results of the first study on a statistically independent sample. This method tests the ability of the results of the first study to generalize to an independent data set. The results of these studies support a 19-factor model of EIL and provide evidence for the construct-related validity of the EILS:I 2.0. We conclude with a discussion and exploration of future efforts to continue to examine the EIL model (Shankman, et al., 2015a) and EILS:I 2.0 (Shankman et al., 2015b).

Literature Review

Emotionally Intelligent Leadership: A Guide for College Students (Shankman & Allen, 2008; Shankman et al., 2015a) is a piece of integrative scholarship (Boyer, 1990) designed to combine concepts from emotional intelligence (e.g., emotional self-perception, emotional self-control) with concepts of leadership (e.g., inspiring others, building teams). The work resulted in what would be considered a mixed model of emotional intelligence and leadership based heavily on the work of several scholars (e.g., Avolio, 2005; Goleman, Boyatzis, & McKee, 2002; Fiedler, 1972; Bass, 1985; Kouzes & Posner, 2007; Mayer & Salovey, 1997). For an in depth exploration of the theory behind version 1.0 of the model, see Allen et al. (2012).

At the most basic level, Emotionally Intelligent Leadership flows from the work of Fiedler (1972) that leadership is a relationship between the leader, followers, and the context. As a result, we assert that leaders should display consciousness of self, consciousness of others, and consciousness of context (Shankman et al., 2015a, p. 10).

1. **Consciousness of Self:** Demonstrating emotionally intelligent leadership involves awareness of your abilities, emotions, and perceptions. Consciousness of self is about prioritizing the inner work of reflection and introspection and appreciating that self-

awareness is a continual and ongoing process.

2. **Consciousness of Others:** Demonstrating emotionally intelligent leadership involves awareness of the abilities, emotions, and perceptions of others. Consciousness of others is about intentionally working with and influencing individuals and groups to bring about positive change.
3. **Consciousness of Context:** Demonstrating emotionally intelligent leadership involves awareness of the setting and situation. Consciousness of context is about paying attention to how environmental factors and internal group dynamics affect the process of leadership.

Along with the three facets, 19 capacities are housed under self, others and context. The original model contained 21 capacities. The current research led to the elimination of two of the original capacities. This will be discussed further in the analysis section. The final 19 capacities bring life and meaning to the three facets (see Table 1). The eight capacities housed under consciousness of self, represent the inner work of leadership. The nine capacities housed under consciousness of others, highlight the interpersonal dimension of leadership. The two capacities housed under consciousness of context focuses on the need for leaders to be in tune at the group and systems levels. Please note that we do not assert that the capacities we have chosen are the *only* or the *best* attributes of leaders. However, the capacities represent major themes from the literature that we feel are a good foundation for student's interested in learning more about leadership.

It is important to note that the four capacities, in theory, that most closely align with various definitions of emotional intelligence are: Emotional Self-Perception, Emotional Self-Control, Displaying Empathy, and Inspiring Others. As noted, our work is integrative in nature (Boyer, 1990) and we agree with Goleman (2000) who stated that "All these EI models, however, share a common core of basic concepts. Emotional intelligence, at the most general level, refers to the *abilities to recognize and regulate emotions in ourselves and in others*" (p. 5).

The other 15 capacities (factors) would be deemed more closely aligned with leadership, but we would suggest, it is difficult to separate them as existing in one domain (strictly EI) or the other (strictly leadership).

Table 1.

*EIL Facets and Capacities***Consciousness of Self**

- Emotional Self-Perception: Identifying emotions and their influence on behavior.
- Emotional Self-Control: Consciously moderating emotions.
- Authenticity: Being transparent and trustworthy.
- Healthy Self-Esteem: Having a balanced sense of self.
- Flexibility: Being open and adaptive to change.
- Optimism: Having a positive outlook.
- Initiative: Taking action.
- Achievement: Striving for excellence.

Consciousness of Others

- Displaying Empathy: Being emotionally in tune with others.
- Inspiring Others: Energizing individuals and groups.
- Coaching Others: Enhancing the skills and abilities of others.
- Capitalizing on Difference: Benefiting from multiple perspectives.
- Developing Relationships: Building a network of trusting relationships.
- Building Teams: Working with others to accomplish a shared purpose.
- Demonstrating Citizenship: Fulfilling responsibilities to the group.
- Managing Conflict: Identifying and resolving conflict.
- Facilitating Change: Working toward new directions.

Consciousness of Context

- Analyzing the Group: Interpreting group dynamics.
- Assessing the Environment: Interpreting external forces and trends.

Note: Shankman et al., 2015a, p. 14

Study One

The purpose of study one was to examine the underlying structure of the draft EILS:I 2.0 model, including its psychometric properties. This included reducing the number of items per scale down to three for practicality purposes while maintaining adequate reliability of the scales and coverage of the content domain. We also ran a preliminary exploratory factor analysis (EFA) to evaluate the number of factors in the original model.

Method

Sample. Participants were 443 Female and Male undergraduate students, graduate students, and recent alumni from public and private Universities across the United States. The sample consisted of 61.9% (N=274) Females, 34.5% (153) Males, and 16 not reporting. The majority of participants were 18-23 years of age (86.0%). Participants were 4.5% Freshmen,

10.2% Sophomores, 21.2% Juniors, 25.3% Seniors, 14.7% Graduate Students, and 20.5% Other (recent alumni). Of these, 77.5% reported that they held leadership positions (at the time they took the survey) on or off campus and 88.9% reported that they served in a leadership position while in college.

Measures/Instrumentation. We began this research using an exploratory draft of the EILS:I 2.0 (Shankman et al., 2015b). This is a self-report survey designed to measure emotionally intelligent leadership (Shankman et al., 2015a). We first developed between seven and nine items for each of the scales from the original model of EIL (Shankman & Allen, 2008) designed to measure the capacities listed in Table 1. Initially, we had 21 scales. Items are Likert-scaled, ranging from 1 (Never) to 7 (Always). Typical survey items read as follows: When serving in a formal or informal leadership role I... “Recognize how my limitations affect my ability to lead” and “Select tasks that highlight my strengths.”

As previously discussed, the assessment was developed with student leaders in mind. A content validity approach to developing the 183 items was taken. Item writers collaborated in the item development and review process to ensure agreement on the content of the scales and the scale items. Each item was written to represent a critical aspect of the corresponding capacity based on the capacity definition (e.g., Healthy Self-Esteem, Optimism). Item writers aimed to ensure that the items adequately represented the content of the capacities. Keeping the users in mind, we knew that we needed to develop an assessment that balanced three criteria outlined by Abell, Springer, and Kamata (2009): 1) strength in internal consistency; 2) low instrument burden on the user; and 3) easy scoring. The goal was three items per capacity.

Data Collection & Analysis. Data were collected via Qualtrics between February and June 2012. A combination of purposive and snowball sampling methodologies were used. The authors personally contacted leadership educators on college campuses requesting that they send the invitation to student leaders and organizations on their campus. The authors also recruited members of Beta Theta Pi Fraternity and via the LeaderShape, Inc. listserv. No incentives were used to recruit the participants.

Data analysis proceeded in several stages. First, the data were cleaned for incomplete responses. Participants who did not complete the survey were eliminated from the study. Therefore, the final data set had no missing data. Second, frequencies and descriptive statistics were calculated to look for potential errors and outliers in the data. Next, we began to reduce the number of items to the three strongest items per scale based on the scale reliabilities and item content. In the end, the reliabilities for the scales ranged between .80 and .93 which is deemed “very good” by DeVillis (2012).

Based on our preliminary analyses of scale reliabilities and an initial exploratory factor analysis (EFA), two of the 21 capacities proved problematic. As a result, we re-examined the content of the scales and ultimately made a decision to remove these capacities from the original model. The process of making the decision to eliminate these two factors is based on standard item and scale development guidelines. The capacities removed are: Honest self-understanding and influence. Our definition of honest self-understanding in the first edition was:

Honest self-understanding: Being aware of your own strengths and limitations. Honest self-understanding means that an individual celebrates and honors their strengths and talents while acknowledging and addressing limitations. Honest self-understanding means accepting the good and bad about one's personality, abilities, and ideas. When emotionally intelligent leaders demonstrate honest self-understanding, they embody a foundational capacity of effective leadership—the ability to see a more holistic self and understand how this impacts their leadership (Shankman, Allen, & Facca, 2010, pp. 16-17).

We realized that we had in fact developed some items that focused on participant strengths and other items that focused on participant limitations. As a result, the items that resulted in strong scale reliabilities were either all about areas of strengths or all about areas for development, but not both. Likewise, after discussion and dialogue, we concluded that perhaps the entire facet of Consciousness of Self was about the capacity of Honest Self-Understanding and as a result, a scale measuring this capacity was unnecessary. Therefore, we decided to remove this capacity from the model (Shankman et al., 2015b).

Another capacity from the original model (influence), proved problematic as well. The definition of influence in the original model was:

Influence: Demonstrating skills of persuasion. Emotionally intelligent leaders have the ability to persuade others with information, ideas, emotion, behavior, and a strong commitment to organizational values and purpose. They involve others to engage in a process of mutual exploration and action. (Shankman, Allen, & Facca, 2010, p. 19).

It was a challenge to develop items that were distinct and unique from some of the other capacities, which caused us to reflect that perhaps the entire facet of consciousness of others is about working with, and influencing others. For example, some may influence via their ability to inspire others, coach others, or develop relationships. We concluded that theoretically, the entire facet of consciousness of others was about influencing and working with others toward a goal. Again, we deemed this capacity redundant and removed it from the model for the second edition of the book and corresponding resources (Shankman et al., 2015a; Shankman et al., 2015b). See Table 2 for a complete list of reliabilities for the 19 scales.

Table 2.
EIL Facets and Capacities

	Alpha
Consciousness of Self	
Emotional Self-Perception (ESP)	.88
Emotional Self-Control (ESC)	.88
Authenticity (AUT)	.85
Healthy Self-Esteem (HSE)	.84
Flexibility (FLEX)	.80
Optimism (OPT)	.91
Initiative (INIT)	.85
Achievement (ACH)	.88
Consciousness of Others	
Displaying Empathy (EMP)	.89
Inspiring Others (IO)	.93
Coaching Others (CO)	.92
Capitalizing on Difference (CD)	.83
Developing Relationships (DR)	.89
Building Teams (BT)	.87
Demonstrating Citizenship (DC)	.81
Managing Conflict (MC)	.91
Facilitating Change (FC)	.87
Consciousness of Context	
Analyzing the Group (AG)	.84
Assessing the Environment (AE)	.88

Results

Study One. Using the sample described above, we performed a confirmatory factor analysis with MPlus 7.1 using maximum likelihood estimation (ML). Three hypothetical model specifications were explored as shown in Table 3 below. First, we tested a one dimensional model to demonstrate that the Inventory is measuring multiple dimensions of EIL rather than a single dimension as you might find for measures of general cognitive ability. Next we tested a three dimensional model using the facet level (e.g., consciousness of self, others, and context) rather than the 19 capacity level. Finally, we tested the proposed 19 capacity model. Results supported a 19-factor multi-dimensional model of EIL, and is consistent with the model described in Shankman et al. (2015a). The factor loadings were all significant and are shown in Table 3. Goodness-of-fit indices, such as SRMR, RMSEA, and CFI, evaluate the fit of the model and indicate the likelihood that the hypothesized model could have resulted in the observed data (Browne & Cudeck, 1993). According to Jackson, Gillapsy, and Purc-Stephenson (2009), CFI is the most commonly reported fit index. CFI is an incremental measure of fit based on the value of chi-squared (Hu & Bentler, 1999). Based on the non-centrality parameter, RMSEA is an absolute measure of fit (Kenny, 2012). SRMR represents, on average, how closely the replicated

correlation matrix for the model fits these data (Kenny, 2012).

Disagreement as to which fit statistics are most appropriate to report and rely upon exists. According to MacCallum, Browne, and Sugawara (1996), RMSEA values of .01, .05, and .08 suggest excellent, good, and mediocre fit, respectively. Hu and Bentler (1999) advocate for a two-index strategy and state that adequate fit exists when CFI > .95 and SRMR < .09; they note, however, that these cutoff values are only approximations. O'Boyle and Williams (2011) suggest that a CFI > .90 and an SRMR < .10 is acceptable. Hu and Bentler suggest a TLI of .95 to be acceptable.

In consideration of the divergent opinions, we reviewed multiple fit indices and their associated cutoffs to determine the acceptability of the hypothesized models.

Results

Table 3.

Summary of Confirmatory Factor Analysis (N=443)

Model	χ^2	Df	CFI	RMSEA	TLI	SRMR
19-factor*	2450.46	1368	.94	.04 (.04, .05)	.93	.05
3-factor	10189.17	1536	.54	.11 (.11, .12)	.52	.08
1-factor	10807.24	1539	.51	.12 (.12, .12)	.49	.09

Note. N=443. *Best-fitting model.

Based on an evaluation of multiple fit indices, the results shown in Table 3 demonstrate acceptable fit for the 19-factor model.

Table 4 provides the item factor loadings for the 19-factor model. The results demonstrate that each factor loading is statistically significant at the .001 level. Factor loadings for four items (Flex3, Init1, DC3, and CD1) are slightly less than the recommended .70 cutoff. However, it is important to consider the empirical results in tandem with the value of the item content to determine adequacy. Evaluation of the content of these items suggests that the items are necessary for adequate content validity of the scales. In future iterations of the Inventory, this will be considered when determining whether item revisions are suggested.

Table 4.
Factor Loadings for CFA

Variable	Factor Loading*
HSE1	.80
HSE2	.87
HSE3	.74
ESP1	.81
ESP2	.89
ESP3	.82
ESC1	.84
ESC2	.84
ESC3	.85
OPT1	.85
OPT2	.77
OPT3	.91
AUT1	.78
AUT2	.88
AUT3	.79
FLEX1	.82
FLEX2	.86
FLEX3	.64
INIT1	.64
INIT2	.91
INIT3	.91
ACH1	.87
ACH2	.90
ACH3	.76
DC1	.85
DC2	.86
DC3	.63
FC1	.78
FC2	.81
FC3	.90
IO1	.83
IO2	.97
IO3	.94
DR1	.92
DR2	.92
DR3	.74
EMP1	.85
EMP2	.89
EMP3	.84
CO1	.87
CO2	.94
CO3	.86

BT1	.86
BT2	.86
BT3	.76
MC1	.87
MC2	.90
MC3	.87
CD1	.69
CD2	.86
CD3	.80
AE1	.89
AE2	.94
AE3	.73
AG1	.76
AG2	.80
AG3	.84

Note: STDYX Standardization coefficients were used; HSE = Healthy Self-Esteem; ESP = Emotional Self-Perception; ESC = Emotional Self-Control; OPT = Optimism; AUT = Authenticity; FLEX = Flexibility; INIT = Initiative; ACH = Achievement; DC = Demonstrating Citizenship; FC = Facilitating Change; IO = Inspiring Others; DR = Developing Relationships; EMP = Empathy; CO = Coaching Others; BT = Building Teams; MC = Managing Conflict; CD = Capitalizing on Differences; AE = Analyzing the Environment; AG = Analyzing the Group.

*All factor loadings significant, $p < .001$, two-tailed.

Study Two

The purpose of study 2 was to cross-validate the results of study 1, by conducting a confirmatory factor analysis on an independent sample, again using MPlus 7.1 with the maximum likelihood estimation (ML) to test the same three models (i.e., 1-factor, 3-factor and 19-factor).

Method

Sample. Participants were 713 Female and Male undergraduate students, graduate students, and recent alumni from public and private Universities across the United States. The sample consisted of 43.2% (N=308) Females, 56.7% (404) Males, and one Transgender (0.1%). The majority of participants were 18-23 years of age (86.0%). Participants were 14.6% Freshmen, 19.5% Sophomores, 29.6% Juniors, 24.7% Seniors, 7.0% Graduate Students, and 4.6% Other (recent alumni). Of these, 78.6% hold leadership positions on or off campus and 82.8% served in a leadership position while in college.

Measures/Instrumentation. We included the three items for each capacity from study one and included a fourth item for three scales to address wording issues. For instance, we were concerned that an item such as “maintain a level head” may not translate easily across cultures. As a result, we included an item, “maintain composure” to see if we could improve the item and maintain strong reliability and validity.

Data Collection/Procedure. Data were collected via Qualtrics between February and May 2014. A combination of purposive and snowball sampling methodologies were used. The authors personally contacted leadership educators on college campuses requesting that they send the invitation to student leaders and organizations on their campus. The authors also recruited members of Beta Theta Pi Fraternity and via the LeaderShape, Inc. listserve. No incentives were provided to the participants.

Data Analysis. Data analysis proceeded in several stages. First, the data were cleaned for incomplete responses. Participants who did not complete the survey were eliminated from the study. Therefore, the final data set had no missing data. Second, frequencies and descriptive statistics were calculated to look for potential errors and outliers in the data. In the end, the reliabilities for the 19 scales ranged between .74 and .92. See Table 5 for a complete list of reliabilities.

Results – Study 2

The purpose of study 2 was to cross-validate the results of study 1. Consistent with the results of the CFA in Study 1, we found support for the hypothesized 19-factor model of EIL. This demonstrates that the results of study 1 can be transferred to an independent sample. The alpha reliabilities are presented in Table 5. The summary of the confirmatory factor analysis is presented in Table 6. Finally, the factor loadings for the CFA are shown in Table 7.

Table 5.
Scale Reliabilities (N=713)

Scale	Alpha
Healthy Self-Esteem	.80
Emotional Self-Perception	.84
Emotional Self-Control	.84
Optimism	.90
Authenticity	.84
Flexibility	.74
Initiative	.74
Achievement	.89
Demonstrating Citizenship	.77
Facilitating Change	.87
Inspiring Others	.89
Developing Relationships	.91
Displaying Empathy	.92
Coaching Others	.88
Building Teams	.80
Managing Conflict	.88
Capitalizing on Difference	.81
Assessing the Environment	.86
Analyzing the Group	.74

Table 6.

Summary of Confirmatory Factor Analysis. (N=713)

Model	χ^2	Df	CFI	RMSEA	TLI	SRMR
19-factor*	2574.32	1368	.95	.04 (.03, .04)	.94	.05
3-factor	13966.71	1536	.50	.11 (.11, .11)	.48	.09
1-factor	14728.90	1539	.47	.11 (.11, .11)	.45	.09

Note. N=713. *Best-fitting model.

Based on the criteria described for part two of study one, the results again support the 19-factor model as acceptable.

Table 7 provides the item factor loadings for the 19-factor model. The results demonstrate that each factor loading is statistically significant at the .001 level. Factor loadings for seven items (HSE1, ESC3, AUT2, FLEX3, INIT1, DC3, AG2) are less than the recommended .70 cutoff. However, it is important to consider the empirical results in tandem with the value of the item content to determine adequacy. Evaluation of the content of these items suggests that the items are necessary for adequate content validity of the scales. The results, however, do suggest that for some items, we may need to consider some revisions in future iterations of the Inventory.

Table 7.

Factor Loadings for CFA Study 2

Variable	Factor Loading*
HSE1	.69
HSE2	.76
HSE3	.82
ESP1	.77
ESP2	.87
ESP3	.78
ESC1	.87
ESC2	.86
ESC3	.67
OPT1	.85
OPT2	.85
OPT3	.88
AUT1	.86
AUT2	.90
AUT3	.65
FLEX1	.72
FLEX2	.75
FLEX3	.64
INIT1	.49
INIT2	.87

INIT3	.83
ACH1	.81
ACH2	.90
ACH3	.86
DC1	.82
DC2	.83
DC3	.57
FC1	.82
FC2	.84
FC3	.85
IO1	.74
IO2	.92
IO3	.91
DR1	.91
DR2	.92
DR3	.79
EMP1	.87
EMP2	.92
EMP3	.87
CO1	.86
CO2	.91
CO3	.78
BT1	.73
BT2	.85
BT3	.71
MC1	.77
MC2	.88
MC3	.88
CD1	.73
CD2	.79
CD3	.81
AE1	.87
AE2	.91
AE3	.72
AG1	.71
AG2	.65
AG3	.73

Note: STDYX Standardization coefficients were used; HSE = Healthy Self-Esteem; ESP = Emotional Self-Perception; ESC = Emotional Self-Control; OPT = Optimism; AUT = Authenticity; FLEX = Flexibility; INIT = Initiative; ACH = Achievement; DC = Demonstrating Citizenship; FC = Facilitating Change; IO = Inspiring Others; DR = Developing Relationships; EMP = Empathy; CO = Coaching Others; BT = Building Teams; MC = Managing Conflict; CD = Capitalizing on Differences; AE = Analyzing the Environment; AG = Analyzing the Group.

*All factor loadings significant, $p < .001$, two-tailed.

Discussion

The goal of the current research was to examine the measurement of the Emotionally Intelligent Leadership construct and to provide evidence of validation for the multidimensional Emotionally Intelligence Leadership for Students: Inventory 2.0 (EILS:I 2.0). Using confirmatory factor analyses with two independent samples of students across the United States, we found initial support for the construct validity and reliability of the EILS:I 2.0. Our results demonstrate that the validity of the 19-factor model measured by the EILS:I 2.0 can be transferred to an independent sample.

The implications for this research primarily lay in two domains: leadership education & learning, and research. From a leadership education perspective, the EILS:I 2.0 provides leadership educators with an evidence-based tool to help students think more critically about their perceived areas of strength and development. The inventory and corresponding activities (Shankman et al., 2015a; Shankman et al., 2015b) provide students with an opportunity to report perceived strengths and areas for development based on the 19 capacity definitions *and* benchmark this information with their results on the assessment. Likewise, the inventory booklet provides students with an opportunity to conduct planning for their own development and growth based upon the information. The inventory/assessment also helps bring the content from the book (Shankman et al., 2015b) to a personal level for students and educators alike. In addition, the inventory provides leadership educators with personalized developmental opportunities for participants so that they can tailor their efforts to meet the needs of individual participants in both curricular and co-curricular settings. As a result, developmental strategies will be specific to the learning styles of each individual user which is a differentiator as individualized learning plans become more and more prevalent in the collegiate context (Solberg, Phelps, Haakenson, Durham, & Timmons, 2012).

From a research perspective, scholars interested in learning more about student leadership have an opportunity to use a tool that has been specifically developed and validated with the student context in mind. Of course, it takes multiple studies to examine different forms of validity (Litwin, 1995), but the EILS:I 2.0 has displayed promise and is another option for those interested in conducting research on the intersection between emotional intelligence and student leadership. As more scholars use the inventory in their research, we will begin to better understand student leadership in multiple contexts and will have an opportunity to further refine the EIL model. This iterative process will benefit scholars and practitioners alike and inform how we develop leadership in a student population as we work to better teach evidence-based leadership development strategies to students (Klimoski & Amos, 2012).

Limitations. Three primary limitations with this research are necessary to take into account when reviewing our results. First, the purposive/snowball sampling methodology has limitations. While we were seeking individuals who have served in leadership roles as participants, the results cannot be generalized to a larger population (e.g., college students who have not served in leadership roles). In both studies, more than 80% of participants had served in formal or informal leadership roles. A second limitation is the self-report nature of the survey. As Podsakoff and Organ (1986) suggest, “self report methodology is the soft underbelly of the organizational research literature” (p. 531). For instance, three common challenges include: the

responses cannot/are difficult to verify (Podsakoff & Organ, 1986), social desirability (Crowne & Marlowe, 1964), and consistency motif (Podsakoff & Organ, 1986). A third limitation is that our results do not provide convergent or divergent validity. According to Litwin (1995), convergent validity “implies that several methods for obtaining the same information about a given trait or concept produce similar results” (p. 43). Likewise, divergent validity requires that a construct not correlate too closely with “similar but distinct concepts or traits” (p. 44). Naturally, this will be the focus of our future research.

Future Research. Establishing validity of an instrument is a long-term process (Litwin, 1995) and no single process is “sufficient by itself” (Abell et al., 2009, p. 99). Thus, we are at the beginning of a long-term endeavor that will likely yield additional feelings of exhilaration, frustration, and the process will assuredly keep us humble. In a more immediate sense, future research will focus on three primary projects. First, we need to establish predictive validity and explore several outcome variables to determine the value of emotionally intelligent leadership. Second, cross-validation of the Inventory in other contexts (e.g., international students, undergraduate vs. graduate students) will be necessary to support the use of the tool with a diverse group of students. Examining group differences could be useful. Finally, studies to examine divergent and convergent validity are necessary.

Conclusion

The purpose of this paper was to report on the preliminary validation results of the EILS:I 2.0. The results of two confirmatory factor analyses involving two independent samples of students across the United States provide initial support for the construct validity of the EIL 19-factor model and validation of the EILSI 2.0. Our hope is that our findings will assist leadership educators and scholars in their work with students and research endeavors.

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