

Enhancing the Emotional Intelligence of Students: Helping the Critical Few

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Abstract: Research has shown that students' emotional intelligence (EI) can be enhanced with time intensive instructional method, nevertheless some studies are inconclusive. This study looked at the impact of including short EI lessons in an introductory hospitality management class. Results showed that students who started with low EI increased their scores significantly; however, those with medium and high EI did not. More intensive EI lessons may be needed for those who started with higher levels of EI. Scholarship of Teaching and Learning (SoTL) reflections were used and the results of the current study were also compared to other similar studies to identify EI teaching methods among faculty in other disciplines. Recommendations are included for those who want to incorporate EI lessons into their classes to enhance students' emotional and social competencies.

Keywords: teaching emotional intelligence (EI), emotional and social competencies (ESC), teaching reflections.

Introduction

Imagine two different scenarios: one, in the middle of the semester; a student "Mike" approached the instructor after class explaining he forgot to do the assignment that was due that day and wanted an extension. The instructor's policy was to not accept late assignments, so an explanation was provided to the student that an extension on his assignment could not be granted since that would not be fair to the other students. Mike became very angry and threw his textbook at the wall and walked out of the classroom. A few remaining students were upset, asked the instructor if she was okay, and she assured them she was fine. It was no surprise that before the end of the semester, the instructor heard from other students that Mike had got in a bar fight and broke some bones in his hand. Mike had some anger management issues and lacked impulse control, which was a bad combination.

The second incident transpired at the end of the semester. About two weeks before the scheduled final exam "John" e-mailed his instructor to say that he would not be taking the final exam. He further explained that his Father was dying of cancer and he wanted to go home to spend as much time as he could with his Father. The instructor responded to John's e-mail with sympathy and offered to let him take the exam early due to his circumstances. John replied with, "I know that I will earn a C in the class if I do not take the exam (he had an A at the time) and I am okay with that; I am trying to prioritize my time to get things done and get home as soon as possible". The instructor agreed that family was a priority and supported his decision.

How could two students be on opposite ends the spectrum in terms of professionalism and composure? One student was poised and the other experienced an emotional hijack (Goleman, 1995). After attending a conference presentation on the emotional intelligence of managers the author began to realize the value and importance of teaching students and future managers about emotional intelligence (EI) and how to improve it. This study is a reflection of that journey.

Researchers have touted the benefits of including EI in higher education (Vandervoort, 2006). Various investigators have analyzed the teaching and learning of students' EI in business

programs (Clark, Callister & Wallace, 2003; Groves, McEnrue, & Shen, 2008; Joyner & Mann, 2011; Kruml & Yockey, 2011; Houghton, Wu, Godwin, Neck & Manz, 2012), psychology classes (Chang, 2006; Nelis Quoidbach, Mikolajczak, & Hansenne, 2009), and hospitality management classes (Scott-Halsell, Shumate & Blum, 2007; Rivera & Lee, 2016). The studies utilized various educational techniques to improve students' EI. However, interpreting and comparing the results proved very difficult due to different EI measures and dissimilar reporting of results. Nevertheless, for the most part, past studies showed that students who received EI-related lessons increased their EI. Therefore, the purpose of this study was two-fold: 1) to evaluate whether or not short EI lessons benefitted students in an introductory hospitality management course and 2) compare some of the various teaching methods and outcomes from other studies.

What is EI?

Thorndike (1920) alluded to social intelligence and defined it as the “ability to understand and manage people” (Thorndike & Stein, 1937, p. 275). Much later, Gardner (1983) described the multiple intelligences model, including intrapersonal and interpersonal intelligences, which are analogous to emotional and social intelligence. Salovey & Mayer (1990) described emotional intelligence as a subset of social intelligence. The most commonly cited definition of EI includes the appraisal, expression, and regulation of emotion in oneself and others along with the use of emotions to guide one's thoughts and actions (Zeidner, Roberts, & Matthews, 2002). Researchers do not always agree on the definition (Cherniss, 2010) and sometimes they debate the validity of EI (McEnrue & Groves, 2006). Some of the argument stems from the difference between EI and emotional and social competencies (ESC). EI denotes the ability to recognize and regulate emotions; whereas, ESC refers more to the performance or aptitude of EI (Cherniss, 2010); however, most of the literature use EI when referring to either EI or ESC. While the concept of EI has been debated, the current research tends to show the benefits of EI and it is “motivating educators and managers to take emotional issues seriously” (Zeidner et al., 2002, p. 229). A meta-analysis of EI research demonstrated that future research involving EI is worthwhile as it is a valuable predictor of performance (Van Rooy & Viswesvaran, 2004). And, several studies have shown a link between EI or ESC and work performance (Cherniss, 2010). Researchers have noted that EI can be developed yet more research is needed, especially with adult populations (McEnrue & Groves, 2006).

There are several EI measurement tools; however, there are four main models often cited: Bar-On's EQ-i (1997); Mayer, Salovey, and Caruso (MSCEIT; 2002); Boyatzis and Goleman ECI (Boyatzis, Goleman & Rhee, 2000); and the Trait Emotional Intelligence Questionnaire (TEIQue: Petrides, 2009) (Cherniss, 2010). Researchers have compared the various models and instruments (Van Rooy & Viswesvaran, 2004; Peña-Sarrionandia, Mikolajczak & Gross, 2015) and they suggested that the models complement one another, yet the various instruments measure slightly different aspects of emotional intelligence (Chang, 2006; Peña-Sarrionandia, et al., 2015).

According to Bar-On (2006) his EQ-i model includes “emotional and social competencies, skills and facilitators that determine how effectively we understand and express ourselves, understand others and relate with them, and cope with daily demands” (p. 14). The instrument has been proven valid among college students (Dawda & Hart, 2000) and has corrective factors for the self-report measure, including a consistency index, along with Positive and Negative Impressions scales (Bar-On, 1997; Bar-On, 2006). Researchers have linked the Bar-On EQ-i results with managers' work performance (Salski & Cartwright, 2002; Langhorn, 2004); therefore, increasing their EI could benefit college students in their current and future places of employment. The Bar-On EQ-i (1997) has 133 questions to encompass the model that has 5 realms with 15 sub-scales: Intrapersonal (Emotional Self-Awareness, Assertiveness, Independence, Self-Regard, and Self-

Actualization), Interpersonal (Empathy, Social Responsibility, and Interpersonal Relationships), Adaptability (Problem-Solving, Flexibility, and Reality Testing), Stress Management (Stress Tolerance and Impulse Control), and General Mood (Optimism and Happiness). In summary, the Bar-On EQ-i model (2006) considers emotional and social competent people as those who can manage others and manage change by being realistic and flexible, solving problems and making decisions to successfully deal with various situations.

Review of EI teaching methods

Transformative learning is a method by which instructors can “learn” or increase their understanding of teaching and learning; reflections in this area can focus on content (what), process (how), and premise (why) (Kreber, 2006). Previous EI studies incorporated a variety of disciplines and included many variations in research design, teaching methods and data analysis. Some researchers used time intensive and in-depth EI lessons. One example provided an illustration of teaching EI to graduate students by utilizing EI-related readings, case studies, and content as an integral part of the course (Jaeger, 2003). Similarly, Chang (2006) made EI a major component of an undergraduate psychology course and included several hours of class time and one-on-one sessions between the instructors and students. Likewise, Groves, McEnrue and Shen (2008) utilized an intensive 11 week training program including a self-assessment, self-development plan, readings, coaching, journal entries and one-on-one sessions with the instructor. All three studies compared the treatment and control groups’ changes in EI scores.

Another study incorporated EI lectures into management classes and had students keep a journal on their feelings and behaviors throughout the semester (Houghton, et al., 2012), unlike the previously mentioned studies they reported results in a qualitative manner. A different approach was taken by Sheehan, McDonald, and Spence (2009) in that they incorporated experiential experience into a course and asked students to keep a reflective journal. Their methods included a post-test only design; however, they collected quantitative and qualitative data from students in an experimental and a control group. Both types of data showed the experiential education had a positive impact on emotional competency development in students.

Nelis, et al., (2009) also used a control group and showed that a very small training group ($n = 19$) had significant increases in EI after 10 hours of EI lessons. Pool and Qualter (2012) utilized a larger sample of undergraduate students with a treatment ($n=62$) and control group ($n=32$) and devoted about 22 hours of class time to EI lessons. Joyner and Mann (2011) stated that they incorporated EI lessons into a three year MBA program; however, it was not specified how much time was spent on EI development.

Others, such as Scott-Halsell, Shumate, and Blum (2007), used two hours of instruction, in a hospitality human resource management class. Kruml & Yockey (2011) included a one hour lecture and a one hour one-on-one feedback session between the instructor and student to review the students’ Bar-On EQ-i pre-test results, but they did not focus on teaching EI to MBA students throughout the rest of the course. Whereas, one study utilized students’ EI pre- and post-test scores to compare them by major (Nursing, Physical Therapy and Health Science); results showed differences by major which differed in the style and delivery of content (Larin, Benson, Wessel, Martin & Ploeg, 2014).

On the contrary, some studies measured the changes in students’ EI over a semester without covering EI concepts. One study notes faculty taught management and leadership skills to undergraduate business students, which positively affected their EI post-test scores (Clark, et al., 2003) and another study reports faculty covered diversity issues in a hospitality management class resulting in a decline in EI scores (Rivera & Lee, 2016). Whereas, other researchers found a

significant difference in changes by gender over a semester, even though EI concepts were not covered in first-year experience courses (Leedy & Smith, 2012). Other researchers, who did not cover EI concepts in class, compared first year business students by major (e.g., Accounting, Business, Culinary Arts, Information Technology, and Sports and Recreation management) to show there were differences among the student groups (Yarrish & Law, 2009).

Based on the past research, a hypothesis was developed:

H1 – EI lessons will improve students' EI.

The research also showed sometimes there were differences by demographic groups, such as gender (Joyner & Mann, 2011; Leedy & Smith, 2012) or major (Yarrish & Law, 2009), and by the beginning level of the students' EI (Kruml & Yockey, 2011).

Therefore, more hypotheses were developed:

H2 – There will be differences in EI development by demographics (gender and major).

H3 – There will be differences in EI development based on the students' EI level.

To engage in the Scholarship of Teaching and Learning (SoTL) includes a systematic review and reflection of teaching and learning research along with personal experience (Kreber & Cranton, 2000; McKinney, 2013). Therefore, the purpose for the second part of this study was to compare some of the EI teaching methods and outcomes among a variety of disciplines with my students' experience. As noted by Kreber (2006), one SoTL question is to identify "best practices" in other words, which methods enhance student learning. While there are many EI models and several measurement tools, this study focused on research that utilized the Bar-On EQ-i (1997) model to demonstrate the variations in methods and results. The disparity in research methods and reporting complicates comparisons among different models, let alone one measure. However, the value of comparing and contrasting the studies can enhance our SoTL of EI.

Methods and Course Design

A passion for the concept of emotional intelligence, led this researcher to embark on an adventure to assess whether students could improve their EI. This paper includes reflections of teaching EI to students in an introductory hospitality management class over the past several years. This project used a pre-test, intervention, and post-test model to assess students' EI, since EI is linked with managers' success.

The Bar-On EQ-i (1997) was utilized for the pre and post-test measures. The EQ-i instrument has been proven valid and reliable among a variety of populations (Bar-On, 2006). Researchers have reported the reliability of the scale among college students with an overall Cronbach's α of .96 and the subscales ranged from .69 to .94 (Dawda & Hart, 2000) and it has been utilized by many faculty in past research. The pre-test was administered in an introductory undergraduate hospitality management course at the beginning of the semester. EI lessons were incorporated into the class sessions after the students took the pre-test (see Figure 1). The EI lessons were short in nature, usually around 10 minutes; the same 5 lessons were used for several years. Each year in September, the first lesson started with information about the definition of EI and some of the research demonstrating the potential value of EI in the workplace (Stein & Book, 2000). The post-test was administered at the end of the semester (December), approximately three months after the pre-test.

Table 1. The five EI Lessons utilized (Adapted from Hughes, Patterson, & Terrell, 2005)

Lesson	Activity
1 – Self Regard	Students listed three of their most proud accomplishments; then, volunteers were sought to share with the whole class. This was followed by a discussion about being able to tell people your strengths and weaknesses, especially in an interview.
2 – Impulse Control & Stress Tolerance	Pictures of peoples' faces were projected, students described possible emotions the people might be feeling, along with discussions of emotionally charged scenarios from hospitality management work experiences Then in small groups, students discussed what stressful activities they encountered and techniques they utilized to reduce stress.
3 – Self-Awareness	Instructor purposely tried to induce stress (see Appendix for details), to prompt discussion about <i>Self-Awareness</i> and recognizing the symptoms of stress.
4 - Interpersonal skills (including Empathy)	Students listed the qualities of the best and worst managers, coworkers, or classmates. This was followed by a discussion on the aspects that demonstrate empathy and learning to read body language. For instance, a guest service agent can gather a lot of information by assessing the guests' moods and interacting with them accordingly.
5 – Adaptability (including Problem-Solving, Flexibility and Reality Testing) and General Mood (including Optimism and Happiness)	Students were asked for examples of when they or a manager demonstrated Adaptability, such as handling a crisis or solving a guest's problem. The session ended with information about ways to increase optimism, by viewing set-backs as temporary and being focused on solutions (not problems).

After one semester of data collection, the pre and post-test scores were compared and there was no improvement in the students' EI scores (see Table 1). However, the same teaching methods were utilized the following Fall semester. The results for year two showed no significant increase in the students' EI score again. The same format EI pre-test, utilizing the same lessons and post-test were continued; yet, the data analysis on a class-by-class basis was discontinued.

After five consecutive years of data collection all the data were combined. The introductory hospitality class was only taught in the fall semester each year, at the same time and day each year, by the same instructor with the same methods and textbook, during a 16 week semester. The class met two days a week, in a face-to-face format, consisting of lectures, activities, discussion, guest speakers, assignments and exams. The majority of students in the class were freshmen (23.2%) or sophomores (36.9%). The average age of the students was 20.39 years old (2.54 SD). Over the five years, more than 400 students took the introductory hospitality management course, over 80% of the students took at least one assessment (pre or post-test). When the scores were matched by student for the pre and post-test there were 241 students who completed both assessments. There were no statistical differences in demographics of the students by year of the class (Major $\chi^2 = 3.6434$, $df = 4$, $p = .0458$; Gender $\chi^2 = 8.130$, $df = 4$, $p = .087$; Classification $\chi^2 = 9.912$, $df = 12$, $p = .624$). The Total EQ-i for the pre- and post-tests were compared by year to test for significant differences (see Table 1). There were no statistically significant differences in the total EQ-i among

years 1-5, in the pre-test ($F=1.839$, $df=4$, $p=0.122$) or the post-test ($F=2.230$, $df=4$, $p=0.066$). The same teaching methods were used each year; thus, the data for all five years was combined.

Table 2. Total EI scores by year

Year	# in class n	matched pairs n	Total EQ-i Means	
			Post-test	Pre-test
1	89	49	92.86 (13.12)	92.86 (12.88)
2	76	43	100.56 (13.38)	98.93 (11.03)
3	86	47	96.11 (11.90)	96.68 (11.28)
4	79	54	95.15 (11.78)	94.35 (11.55)
5	85	48	96.17 (12.94)	95.94 (11.06)
Total	415	241		

After data were combined, paired t-tests were conducted to compare pre and post-test EI scores by major (hospitality and non-hospitality students), gender, and classification, as well as comparing the scores by groups of low (those with EI 90 and below), medium (EI = 91-100), and high (EI = 101 and above) baselines. The low EQ-i group showed a significant increase from the pre- to post-test; therefore, analyses were conducted on all 5 EI realms for the low, medium and high groups. Lastly, paired t-tests were conducted for the whole sample on all 5 realms and 15 subcategories, so that comparisons could be made with other research studies.

Results

There was no significant difference in the overall EI between the pre and post-tests (see Table 2). About half of the students were hospitality majors, while the other half consisted of students from other majors (e.g. Sports/Turf Grass Management, Business Administration, Retail Merchandising, and Interior Design) who were taking the class. There were no significant differences by major ($t = 1.076$, $df = 239$, $p=0.283$), gender ($t = -1.804$, $df = 217$, $p = 0.073$) or classification ($F=1.370$, $df=3$, $p=.253$). Therefore, Hypotheses 1 and 2 were rejected.

Table 3. Paired t-test of scores before and after receiving EI lessons in an introductory course

	Means (SD)		df	t	p	Diff (SD)
	Post-test	Pre-test				
All students						
Total EQ-i (n=241)	96.04 (12.74)	95.63 (11.68)	240	0.834	0.405	0.41 (7.49)
Major						
Hospitality (n= 123)	96.80 (12.00)	96.36 (11.28)	122	0.620	0.536	0.45 (8.00)
Non-hospitality (n=118)	95.24(13.47)	94.88(12.08)	117	0.555	0.580	0.36 (6.96)
Gender						
Male	94.35 (13.96)	93.79 (12.53)	67	0.527	0.600	0.56 (8.74)

(n=68)						
Female (n=151)	96.86(12.40)	96.58(11.32)	150	0.471	0.638	0.28 (7.25)
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Classification						
Freshman (n=56)	96.73 (11.62)	96.23 (11.15)	55	.500	.619	.50 (7.48)
Sophomore (n=89)	94.40 (11.86)	94.87 (11.58)	88	-.591	.556	-.46 (7.36)
Junior (n=54)	96.74 (14.09)	96.78 (12.20)	53	-.034	.973	-.04 (8.02)
Senior (n=32)	93.75 (12.32)	91.94 (10.70)	31	1.530	.136	1.81 (6.70)
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EI Groups						
Low * (n=74)	83.50 (9.51)	81.58 (6.79)	73	2.308	0.024	1.92 (7.15)
Medium (n=80)	96.26 (8.30)	96.23 (2.82)	80	0.044	0.965	0.04 (7.65)
High (n=87)	106.49 (8.18)	107.05 (5.71)	86	-0.685	0.495	-0.55 (7.51)

*p < 0.05

When the Total EQ-i of the pre-test group was segmented by low, medium and high scorers, the paired t-tests showed a significant increase among those beginning with lower EI. When comparisons were made between the low, medium and high scorers across the five (Intrapersonal, Interpersonal, Stress Management, Adaptability and General Mood) realms of EI, there were significant increases in the Intrapersonal and Adaptability realms for the low scorers and a significant decrease in the medium scorers in the realm of General Mood (See Table 3). The overall EQ-i and two of the five realms of EI significantly increased for the low EI group. Thus, Hypotheses 3 was supported.

Table 4. Paired t-test of scores by low, medium and high EI groups

	Means (SD)		t	p	Diff (SD)
	Post-test	Pre-test			
<i>Total EQ-i</i>					
Low *(n=74)	83.50 (9.51)	81.58 (6.76)	2.308	.024	1.92 (7.15)
Medium (n=80)	96.26 (8.30)	96.23 (2.82)	0.044	.965	0.04 (7.65)
High (n=87)	106.49 (8.18)	107.05 (5.71)	-0.685	.495	-0.55 (7.51)
<i>Intrapersonal</i>					
Low *	82.24 (11.60)	80.38 (9.19)	2.001	.049	1.87 (8.02)
Medium	97.18 (8.95)	96.89 (6.46)	0.313	.755	0.29 (8.22)
High	107.16 (8.51)	107.76 (7.36)	-0.726	.470	-0.60 (7.68)
<i>Interpersonal</i>					
Low	89.85 (12.71)	89.59 (12.22)	0.241	.810	0.26 (9.17)
Medium	100.06 (10.15)	99.98 (8.03)	0.092	.927	0.88 (8.49)
High*	107.85 (9.57)	109.43 (7.41)	-1.880	.063	-1.58 (7.81)
<i>Stress Management</i>					
Low	91.07 (9.44)	89.61 (9.62)	1.489	.141	1.46 (8.43)
Medium	98.00 (10.37)	97.33 (8.79)	0.689	.493	0.68 (8.76)

High	104.08 (9.49)	103.34 (9.30)	0.738	.463	0.74 (9.30)
<i>Adaptability</i>					
Low *	85.35 (8.88)	82.86 (8.16)	2.884	.005	2.49 (7.42)
Medium	93.04 (9.04)	91.80 (6.74)	1.481	.142	1.24 (7.50)
High	102.20 (9.93)	102.22 (8.69)	-0.023	.981	-0.02 (9.18)
<i>General Mood</i>					
Low	89.97 (10.04)	89.27 (9.47)	0.864	.391	0.70 (7.00)
Medium*	100.01 (8.53)	102.89 (6.35)	-2.016	.047	-1.88 (8.37)
High	108.67 (7.55)	108.91 (6.56)	-0.317	.752	-0.24 (7.11)

* p < .05

When paired t-tests were used on the whole sample (n=241) and all 15 categories of the Bar-On EQ-i assessment, there were some significant differences between the pre- and post-test scores in Emotional Self-Awareness, Stress Tolerance, Adaptability, Problem Solving, and Happiness (see Table 4). Lastly, a table was made to compare the mean differences across studies that utilized the Bar-On EQ-i assessment with a pre and post-test design (Table 5). The summary shows the difference between pre- and post-test scores of eleven other research studies that utilized the Bar-On EQ-i assessment. The number of participants in the other studies ranged from 17-97.

Table 5. Paired T-tests of the Bar-On EQi 5 realms and 15 sub-categories (n=241)

	Means (SD)		t	p	Diff (SD)
	Post test	Pre test			
Total EQ-i	96.04 (12.74)	95.63 (11.68)	0.83	.405	0.40 (7.49)
Intrapersonal	96.20 (14.04)	95.74 (13.58)	0.88	.381	0.45 (8.00)
<i>Self-Regard</i>	98.77 (13.10)	99.22 (13.67)	-0.79	.431	-0.45 (8.82)
<i>Emotional Self Awareness*</i>	100.54 (13.86)	98.98 (13.61)	2.55	.011	1.56 (9.51)
<i>Assertiveness</i>	97.85 (13.50)	97.03 (13.09)	1.23	.220	0.75 (9.49)
<i>Independence</i>	90.99 (13.12)	90.51 (13.82)	0.80	.423	0.48 (9.22)
<i>Self-Actualization</i>	97.13 (14.06)	97.56 (13.57)	-0.66	.510	-0.44 (10.26)
Interpersonal	99.74 (13.04)	100.20 (12.32)	-0.84	.400	-0.46 (8.48)
<i>Empathy</i>	98.64 (13.45)	98.20 (14.24)	0.63	.529	0.44 (10.83)
<i>Social Responsibility</i>	96.19 (12.82)	96.29 (12.66)	-0.16	.874	-0.10 (9.33)
<i>Interpersonal Relationships</i>	102.98 (13.18)	103.76 (12.62)	-1.37	.171	-0.78 (8.82)
Stress Management	98.07 (11.09)	97.13 (10.77)	1.65	.100	0.94 (8.83)
<i>Stress Tolerance**</i>	96.59 (12.10)	95.08 (12.43)	2.59	.010	1.51 (9.06)
<i>Impulse Control</i>	99.73 (11.81)	99.68 (12.32)	0.09	.928	0.06 (10.01)
Adaptability*	93.98 (11.59)	92.80 (11.19)	2.26	.025	1.19 (8.16)
<i>Reality Testing</i>	95.36 (12.37)	94.43 (11.32)	1.56	.121	0.93 (9.22)

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<i>Flexibility</i>	97.07 (13.108)	97.19 (13.59)	-0.19	.846	-0.12 (9.94)
<i>Problem Solving**</i>	92.63 (12.06)	90.49 (12.24)	3.10	.002	2.14 (10.72)
General Mood	100.38 (11.55)	100.88 (11.06)	-1.02	.308	-0.50 (7.56)
<i>Optimism</i>	95.38 (12.20)	94.71 (12.05)	1.11	.267	0.67 (9.39)
<i>Happiness**</i>	104.65 (11.56)	106.15 (11.09)	-2.78	.006	-1.47 (8.17)

* $p < .05$, ** $p < .01$

Table 6. Comparison of Bar-On EQi pre- and post-test differences

Difference between post & pre tests	Slaski & Cartwright (2003) ^a n=56	Fletcher et al. (2009) n=17
Total EQ-i	5.2***	3.9 (7.4)
Time on Task (EI lessons)	4 days	28 hours
# of significant differences	1/1	Not reported
Sample Population	Retail managers in UK	Medical students in UK
Time between pre and post-test	6 months	7.5 months

*p < .05, ** p < .01, *** p < .001

^a Calculated by hand (not reported in the publication/study)

Table 6. (continued) Comparison of Bar-On EQi pre- and post-test differences

Difference between post & pre tests	Jaeger (2003) n=31	Chang (2006) n = 79	Muyia & Kacirek (2009) n=43	Leedy & Smith (2012) ^b n=97	Nafukho et. al. (2016) n=38
Total EQ-i	9.90 (12.18)***		1.05	n.s.	4.66 (12.30)*
Intrapersonal	9.58 (12.02)	6.05 (10.23)***	-1.37	n.s.	4.40 (12.56)*
Interpersonal	6.77 (11.34)	2.05 (10.74)	-0.84	n.s.	5.61 (12.99)**
Stress Management	8.16 (9.95)	2.60 (9.14)	1.33	n.s.	3.61 (12.06)
Adaptability	8.03 (12.16)	6.54 (11.37)***	-2.09	n.s.	5.50 (13.72)*
General Mood	6.55 (10.44)	3.49 (11.54)*	1.44	n.s.	5.53 (15.00)*
Time on Task (EI lessons)	Not reported	16 weeks	9 days	None	5 days

# of significant differences	1 reported	3/5	0/6	0/6	5/6
Sample Population	Public Admin graduate students in US	Undergraduate Psychology class in US	Leadership training program provided by College of Business - Exec Educ	College Freshman	NGO leaders from 30 countries
Time between pre and post-test	Not reported	16 weeks	1 year	1 semester	1 year

A negative score indicates the pre-test score was higher.

*p < .05, ** p < .01, *** p < .001

^b Pre-test scores reported, but not post-test scores

Table 6. (continued) Comparison of Bar-On EQi pre- and post-test differences

Difference between post & pre tests	Jonker (2009) n=20	Kruml & Yockey (2011) n = 78	Joyner & Mann (2011) ^a n = 55	Dippenar & Schapp (2017) ^a n=30	Current study n =241
Total EQ-i	5.60 (9.40)	4.72(8.23)***	5.1***	6.57*	0.40 (7.49)
Intrapersonal	3.40 (9.60)		4.7***	4.27*	0.45 (8.00)
<i>Self-Regard</i>	2.60 (6.70)	3.42 (7.50)***	2.2	1.30*	-0.45 (8.82)
<i>Emotional Self Awareness</i>	5.40 (13.80)	4.80 (10.10)***	5.4***	4.67	1.56 (9.51)**
<i>Assertiveness</i>	0.60 (12.30)	4.08 (9.81)***	5.9***	4.27	0.75 (9.49)
<i>Independence</i>	0.80 (9.50)	3.46 (10.66)**	2.1	2.47	0.48 (9.22)
<i>Self-Actualization</i>	3.05 (10.70)	4.15 (8.36)***	2.9*	3.40	-0.44 (10.26)
Interpersonal	4.85 (10.40)		4.2***	6.14	-0.46 (8.48)
<i>Empathy</i>	5.60 (10.70)	6.76 (10.27)***	3.9*	5.90	0.44 (10.83)
<i>Social Responsibility</i>	1.80 (10.02)	4.05 (10.30)***	2.9*	5.70	-0.10 (9.33)
<i>Interpersonal Relationships</i>	4.20 (10.50)	4.03 (9.35)***	4.0***	4.90	-0.78 (8.82)
Stress Management	2.50 (11.00)		3.9**	5.74	0.94 (8.83)
<i>Stress Tolerance</i>	4.60 (9.30)	3.37 (9.97)**	3.1*	3.00	1.51 (9.06)**

<i>Impulse Control</i>	0.05 (12.11)	-0.62 (9.45)	3.3*	6.76	0.06 (10.01)
Adaptability	8.50 (7.20)		5.6***	1.14	1.19 (8.16)*
<i>Reality Testing</i>	8.05 (6.20)	4.10 (8.15)***	4.7***	2.46	0.93 (9.22)
<i>Flexibility</i>	4.20 (10.50)	3.32 (10.16)**	4.0**	4.00	-0.12 (9.94)
<i>Problem Solving</i>	7.20 (8.20)	1.54 (10.83)	4.8***	3.77	2.14 (10.72)**
General Mood	4.20 (9.90)		3.3**	3.67	-0.50 (7.56)
<i>Optimism</i>	8.00 (11.30)	3.86 (8.22)***	3.4**	3.60	0.67 (9.39)
<i>Happiness</i>	0.55 (11.05)	3.36 (6.55)***	2.6*	3.10	-1.47 (8.17)**
Time on Task (EI lessons)	5 days	2 hrs	Interspersed through 45 credit degree (3 yr) program	9 lessons (one-on-one coaching)	1 hr
# of significant differences	Not reported	14/16	19/21	6/21	5/21
Sample Population	Future accountants	MBA students in US	MBA students in US	Financial services leaders in South Africa	Undergraduate Hospitality management class in US
Time between pre & post-test	10 days	2 groups = 16 weeks 2 groups = 7 weeks	33 months	9-12 months	12 weeks

A negative score indicates the pre-test score was higher.

*p < .05, ** p < .01, *** p < .001

^a Calculated by hand (not reported in the publication/study)

EI research is an important topic to many fields of study ranging from medicine to business to psychology. However, the study of EI in several subject areas has led to different reporting methods. Many different research projects studying the scholarship of teaching and learning related to EI have published results in a variety of ways; therefore it is difficult to compare the results from one teaching example to another. Nonetheless, the table is a summary of some previous studies compared to the outcomes of this study, resulting in a comparison of 12 studies focusing on developing EI in individuals. Overall, six of the ten studies that reported changes in the Total EQ-i from the pre to post-test scores with a significant increase (Slaski & Cartwright, 2003; Jaeger, 2003; Nafukho et al., 2016; Kruml & Yockey, 2011; Joyner & Mann, 2011; Dippenaar & Schapp, 2017) and eight of the ten studies showed a significant increase in one or more EI scores (in addition to the aforementioned, Chang, 2006 and the current study). Two studies show no significant difference between the pre and post-test EI scores (Muyia & Kacirek, 2009; Leedy & Smith, 2012) and two others did not compare the pre and post-test scores (Fletcher et al., 2009; Jonker, 2009).

Only some researchers reported the amount of time and types of teaching techniques that were utilized. Two studies reported only the difference for the Total EQ-i score (Slaski & Cartwright, 2003; Fletcher, Leadbetter, Curran, & O'Sullivan, 2009), five authors reported the differences among the 5 EI realm scores (Jaeger, 2003; Chang, 2006; Muyia & Kacirek, 2009; Leedy & Smith, 2012; Nafukho, Muyia, Farnia, Kacirek, & Lynham, 2016) and four other studies not including the current study reported EI scores for the 15 subcategories, but three of those reported the 5 realms with the 15 subcategories (Jonker, 2009; Joyner & Mann, 2011) and the other did not (Kruml & Yockey, 2011). Of the five studies reporting the 5 EI realms, only three reported the Total EQ-i of the pre and post-test along with the five realms of EI. Two studies reported merely the pre and post-test scores, while most of the others reported the mean differences and standard deviations between the pre and post-test scores and one study only reported the pre-test scores (Leedy & Smith, 2012). Beyond the differences in what results were reported, there were also a variety of statistical analyses employed. For instance, Jaeger (2003) only reported the statistics for comparing the Total EQ-i of the treatment group for the pre and post-test ($t(30) = 4.257, p < .001$), the remaining analyses were comparing the treatment ($n=31$) and control group ($n=119$). Fletcher et al. (2009) only reported the results comparing the treatment and control group. The populations that participated in the past research were diverse; several studies included graduate students, while two studies used undergraduate students (Chang, 2006; Leedy & Smith, 2012) and other studies involved managers or accountants (Slaski & Cartwright, 2003; Jonker, 2009). Some researchers administered the post-test at the end of the treatment (Jaeger, 2003; Chang, 2006; Kruml & Yockey, 2011) and others waited one year after the treatment (Muyia & Kacirek, 2009; Nafukho et al., 2016). The detail of the teaching methods also varied by study; some researchers noted using case studies (Jaeger, 2003; Chang, 2006) and role plays (Chang, 2006; Slaski & Cartwright, 2003). Interestingly, Jaeger (2003) noted using Goleman's book and the Bar-On EQ-i assessment. Other teaching tools included group projects, lectures, student diaries, self-development plans, class discussions, one-on-one coaching, and activities (Jaeger, 2003; Chang, 2006; Slaski & Cartwright, 2003; Joyner & Mann, 2011; Nafukho et al., 2016; Dippenaar & Schapp, 2017). Time on task varied in the studies from no time spent on teaching EI to over 40 hours spent on enhancing student learning of EI. Increases in EI do not appear to be related to time on task.

Discussion & Conclusions

Five short lessons (e.g., 10 minutes) were used during the course of a semester to see if students' EI scores would increase. The students who started with low EI significantly increased their EI scores, showing EI lessons can be incorporated into a hospitality management class with success. When all

participants were combined, 21 categories were analyzed and four areas showed an improvement in scores. This increase could be a reflection of the EI lessons, because these EI areas were specifically covered during class. On the other hand, changes in students' EI might be due to other factors revolving around work, family or other classes. Nevertheless, it took several years of teaching and reflection before the true value of my SoTL experience was realized.

Results from this study showed no difference in EI development by major or gender, which differs from some past studies (Joyner & Mann, 2011; Leedy & Smith, 2012; Yarrish & Law, 2009). However, when the students were divided into groups by their beginning EI levels, there were significant increases in a few EI areas for those beginning with low EI, but no increases for those with high EI. Similarly, Kruml and Yockey (2011) found those with high EI did not show a significant increase in their EI scores. The results of both studies may indicate those who start with low EI can benefit the most with a short amount of time on task. Whereas, those with high EI may need to delve deeper into their own development; however, they likely benefitted from seeing how to assist others improve their EI.

SoTL practices can assist with our understanding of how students learn and reflection can be used to find ways to enhance student learning (Kreber, 2006). Comparison of educational techniques used by other faculty showed the method that MBA faculty used to teach EI to students included introducing the concepts to students during one course, ranging from 7 week to 16 weeks and varying by delivery methods from face-to-face and online (Kruml & Yockey, 2011) to integrating the EI competencies into an entire three-year MBA program (Joyner & Mann, 2011). Psychology faculty used more in-depth lessons and control groups to measure whether or not students could increase their EI (Chang, 2006; Nelis, et al., 2009).

The results from this study showed some significant differences in a few categories with short EI lessons incorporated into an undergraduate class; whereas, the two studies of MBA students showed increases in almost all the EI realms and sub-categories. Chang (2006) found a significant increase in a few EI realms with time-intensive lessons included in an undergraduate psychology class. Therefore, EI lessons may need to be tailored to the population (undergraduates, graduate students, non-students and/or managers, low or high EI) to increase the participants' learning. Similarly, Larin, et al., (2014) recommended intentional EI lessons might be needed to show significant improvements. Faculty could incorporate EI lessons into a course through a variety of methods; however, it seems prudent that the topic somehow be related to the course.

As is typical in SoTL research, past studies tended to have a smaller sample size; consequently, there were limitations on the statistical analyses that could be performed. Researchers have varied greatly in terms of what outcomes were reported; these differences made it challenging to compare results and draw conclusions across studies. It would vastly improve the ability of researchers to evaluate the effectiveness of EI lessons if all researchers were more consistent in reporting results.

SoTL research should not just be about finding significant differences. The first few years of this study were filled with hope and optimism of teaching EI; yet, the statistical results were not significant. However, after a few more years of data collection enough samples were collected to conduct statistical analyses by EI baseline group (low, medium, and high) and reveal that some students were enhancing their EI. Therefore, SoTL researchers should not be discouraged by the statistical outcomes.

Reflections on teaching practices helps develop knowledge, as well as assess whether students were learning. Through early analysis it appeared students were not enhancing their EI; however, with further analyses, when students were grouped by low-medium-high EI, there were some significant improvements in the low EI group. As a result, the author has started a new technique in upper-level class to incorporate individualized lesson plans where students do self-

assessments and a reflective journal. More SoTL research on EI can encourage others to try new techniques and share results that we can all build upon.

SoTL includes a review of instructional, pedagogical and curricular elements (Kreber & Cranton, 2000); therefore, SoTL can assist with assessment, program review and accreditation efforts (McKinney, 2013). Similarly, EI assessments could be used to measure student learning and included with assessment reports. Recommendations for faculty who want to teach EI or ESC in the future include: 1) decide the purpose of teaching EI or ESC and set some goals; 2) determine which model best fits with the purpose of the class; then choose an assessment to be utilized; and, 3) finally, develop lessons plans to meet the learning outcomes or course objectives. After teaching and assessing student learning, faculty should reflect upon the course and make improvements to EI lessons and activities.

There were some limitations to my study, it is not known if all the students were present during all of the EI lessons in the introductory course. Also, the research took place with one faculty member. Future studies could see if other faculty and programs could produce similar results with short EI lessons. More research is needed to assess the best techniques for teaching EI and if faculty EI affects student learning.

Appendix

Appendix 1. Sample EI lesson: Stress Management (includes subcategories of Stress Tolerance and Impulse Control)

The instructor walked into class and greeted the students, followed by an announcement that they needed to turn in their assignment from last week. In actuality, there was no assignment due; the announcement was made to induce stress. Some students reacted with outbursts of “What?” and “No”, other students were very quiet, visibly concerned, and perplexed. The instructor announced there was no assignment due, showed an anatomical picture of a human body and asked, “where do you feel the stress? Is your breathing or heartrate faster?” This was followed by a discussion on what physiological symptoms of stress were incurred (e.g., tension, perspiration, or rapid pulse). Then, students were asked to list healthy methods of coping with stress, such as exercise, listening to music, or talking with friends.

Finally, there was a discussion on the value of delaying impulses or outbursts when stressed by a surprise announcement. The instructor also told the story about the marshmallow test conducted by Walter Mischel at Stanford (Stein & Book, 2000). Essentially Mischel found that the young children who were able to delay gratification of eating the marshmallow scored significantly higher on SAT tests taken many years later. For more information see:

<http://www.cnn.com/2014/12/22/us/marshmallow-test/index.html>

For other EI sample lessons, see Brown (2003).

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