

Electronic Thesis and Dissertation Repository

---

10-28-2015 12:00 AM

## Striving for Teaching Success: Enhancing Emotional Intelligence in Pre-Service Teachers

Ashley K. Vesely-Maillefer, *The University of Western Ontario*

Supervisor: Dr. Donald H. Saklofske, *The University of Western Ontario*

A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Psychology

© Ashley K. Vesely-Maillefer 2015

Follow this and additional works at: <https://ir.lib.uwo.ca/etd>



Part of the [Psychology Commons](#)

---

### Recommended Citation

Vesely-Maillefer, Ashley K., "Striving for Teaching Success: Enhancing Emotional Intelligence in Pre-Service Teachers" (2015). *Electronic Thesis and Dissertation Repository*. 3371.  
<https://ir.lib.uwo.ca/etd/3371>

This Dissertation/Thesis is brought to you for free and open access by Scholarship@Western. It has been accepted for inclusion in Electronic Thesis and Dissertation Repository by an authorized administrator of Scholarship@Western. For more information, please contact [wlsadmin@uwo.ca](mailto:wlsadmin@uwo.ca).

STRIVING FOR TEACHING SUCCESS: ENHANCING EMOTIONAL  
INTELLIGENCE IN PRE-SERVICE TEACHERS

Integrated Article

by

Ashley Katherine Vesely-Maillefer

Graduate Program in Clinical Psychology

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy

The School of Graduate and Postdoctoral Studies  
The University of Western Ontario  
London, Ontario, Canada

© Ashley Vesely-Maillefer 2015

## **Abstract**

Research has confirmed job dissatisfaction, and high levels of occupational stress and burnout resulting from the emotional demands of teaching. This dissertation focuses on a potential solution to support teachers' psychological wellbeing in their paramount role to society: training in emotional intelligence. Recent research has demonstrated not only the positive role of emotional intelligence (EI) in enhancing stress management, coping skills, psychological wellbeing, and resilience, but that EI can be developed through EI training. Empirical evidence has recently shown support for EI training specifically within the teaching population. However, there remains a dearth of applicable empirically-based training programs aimed at effectively helping to manage teacher stress in the classroom. Building upon the success that EI training programs have had in a range of populations, the present research focused not only on the evaluation of one specific program, but also sought further understanding regarding the mechanisms through which EI influences positive outcomes. The current work follows the administration of three rounds of one such program, *Managing Occupational Stress Through the Development of Emotional Intelligence* (Gardner, Stough, & Hansen, 2008) to a group of pre-service teachers. These studies provide a comprehensive, theory-driven evaluation of: 1) the short-term and intermediate outcomes and 2) the implementation and processes with slight modifications of this program between training sessions. The nature of the mixed-method evaluation design involved both quantitative and qualitative analyses of each training component to examine the assumptions underlying service delivery and processes. It also allowed for a more direct exploration of causal effects. Results indicated not only that EI improves compared to controls post-program and at follow-up (1- and 6-month), but also that stress indicators decrease coincidental with an increase in adaptive coping and teacher efficacy. Finally, the assessment of participant responses, comprehension, skills application, and feedback offers a critical understanding regarding how EI impacts outcomes along with insight regarding the agents of change that may drive learning and application processes.

## **Keywords**

emotional intelligence; teachers; training; teacher efficacy; stress management; coping; professional development

## Co-Authorship Statement

There are two articles included within this dissertation that incorporated the outcomes of joint research undertaken in collaboration with other researchers. In both cases, the author of this dissertation performed the key ideas, primary contributions, experimental designs, data analysis, and interpretation. The contribution of co-authors was primarily through the provision of supervision, manuscript evaluation, and editing. I have obtained permission from the co-authors as well as the journals<sup>1</sup> in which the articles were published to include the above materials in my thesis. I certify that, with the above qualification, this thesis, and the research to which it refers, is the product of my own work.

---

<sup>1</sup> See Appendix D for copy of permission from each publisher

## Acknowledgments

Many individuals were instrumental in the completion of this dissertation.

I extend my sincerest gratitude to my supervisor Dr. Donald H. Saklofske for his untiring enthusiasm, support, and continuous dedication to both my academic work and my personal wellbeing. Your genuine caring and concern alongside your brilliant mind and motivating words of wisdom have encouraged me to reach this milestone. I will always be thankful for the confidence you instilled by persistently believing in me.

I would like to thank my advisory committee: Dr. Alan Leschied for his continuous warmth of heart and diligent feedback. Thank you for your flexibility, willingness to help, and your always-calming reassurance; Dr. Evelyn Vingilis for her expertise, patience, and valuable insight. Your passion for program evaluation inspired this dissertation and prompted my continued interest in this field of research; Dr. Nick Kuiper for his kind support and appreciated perspectives. Thank you for always having an open door.

I am very thankful to my research assistants Angela Allan and Anita Feher who, at different times, kept me on track organizationally with their effort, commitment to this project, and often kind words of encouragement.

Thank you also to Dr. Greg Moran for delivering insightful assessments of my work and to him, Dr. Jason Brown, and Dr. Con Stough for agreeing to serve on my examining committee. I am also grateful to Dr. David Nordstokke for his collaboration on this research project, as well as to Dr. Paul Tremblay, and Dr. Alexander Siegling for their statistical support.

A heartfelt special thanks to Dr. Marina Fiori who supported me during the toughest times of writing with no dearth of encouragement, supplemented by exhilarating theoretical discussions.

To my friends, all of you have provided me with encouragement in different ways, especially Alyssa Altomare who has tirelessly supported me through the ups and downs of this degree. Thank you ALL for your love and your confidence in my abilities.

I am forever grateful to my parents Deborah and Peter Vesely and my siblings, Amorette, and Sean Vesely for their understanding, encouragement, and unconditional love that that I have felt throughout this and all other journeys. Your support is the foundation of my strength to persevere.

I hold deep appreciation for my husband, J r my Maillefer, who has lifted my spirit regardless of circumstances. Your love and my love for you carry me through.

## Table of Contents

Abstract .....	ii
Keywords .....	ii
Co-Authorship Statement.....	iii
Acknowledgments.....	iv
Table of Contents .....	v
List of Tables .....	x
List of Figures .....	xii
List of Appendices .....	xiv
Chapter 1 .....	1
Introduction: Emotional Intelligence in the Context of Teaching .....	1
General Introduction & Overall Purpose .....	1
Introduction to Emotional Intelligence – Background, Development, & Theory .....	3
Brief History .....	3
Theoretical Perspectives and Measurement .....	6
Controversy and Issues with Construct and Measurement .....	11
Moving Forward: EI Training.....	14
Review of Additional EI Training Programs .....	14
References.....	17
Chapter 2.....	31
Teachers – The Vital Resource: the Contribution of Emotional Intelligence to Teacher Efficacy and Well-Being.....	31
Abstract.....	31
Strengthening Teacher Efficacy: What Is It and Why Is Support so Imperative?.....	33
Emotional Intelligence: How Is It Related to Teacher Efficacy? .....	36

How Can EI Facilitate the Enhancement of Teacher Efficacy?.....	40
Conclusion and Future Research Directions .....	43
References.....	45
Chapter 3.....	55
EI & Teachers: Paving the Way for a Comprehensive Program Evaluation.....	55
EI Model used in the Present Studies: The Swinburne EI Model.....	55
Implementation: The Swinburne EI Program .....	56
Rationale for Comprehensive Program Evaluation: Conceptual Framework.....	58
Evaluation Objectives .....	66
References.....	68
Chapter 4.....	71
The Present Study: Administering the EI Training Program.....	71
Study Set-up and Phases of Data Collection.....	71
The Present Study: Phase One – Outcome Evaluation Only .....	72
Emotional Intelligence Training and Pre-Service Teacher Wellbeing .....	73
Abstract.....	73
Introduction.....	73
Emotional Intelligence and Teacher Stress .....	74
Teachers, pre-service teachers, and EI training .....	75
The present study: Program version 1 – Phase 1 .....	76
Method .....	77
Participants and Procedure.....	77
Measures .....	78
Results.....	79
Descriptive Statistics, Internal Consistencies and Intercorrelations .....	79

Discussion.....	82
Implications, Limitations, and Future Directions .....	83
References.....	84
Chapter 5.....	89
The Present Study: Program Version Two – Phases Two and Three: Comprehensive Evaluation .....	89
Methods.....	89
Study design.....	89
Recruitment and Group Assignment Procedure.....	90
Total Participants .....	90
Program Administration.....	92
Chapter 5A: Outcome Evaluation Specifics .....	92
Measures .....	92
Completion of Outcome Measures.....	94
Data Analysis .....	94
Results.....	94
Objective 1: To Evaluate Emotional Intelligence across Time Points .....	95
Objective 2a: To evaluate the impact of the EI program on → SWL.....	99
Objective 2b: To evaluate the impact of the EI program on → Coping .....	101
Objective 2c: To evaluate the impact of the EI program on → Stress.....	103
Objective 2d: To evaluate the impact of the EI program on → T Efficacy .....	104
Discussion .....	112
Interpretation of Objective 1 Results – Emotional Intelligence Across Time ....	112
Interpretation of Objective 2 Results – Psychological Wellbeing Variables Across Time .....	113
Chapter 5B: Process Evaluation Specifics .....	116



Measures .....	116
Completion of Process Measures .....	119
Data Analysis and Interpretation.....	120
Results and Discussion .....	121
Objective 3: To evaluate Fidelity of Implementation (Figure 2 Box 1) .....	121
Interpretation of Objective 3 Results – Fidelity of Implementation .....	123
Objective 4a: To Evaluate Participation (Figure 2 Box 2) .....	123
Interpretation of Objective 4a Results - To Evaluate Participation .....	127
Objective 4b: To Evaluate Content Understanding (Figure 2 Box 3) .....	129
Interpretation of Objective 4b Results: To Evaluate Content Understanding ....	138
Objective 4c: To Evaluate Application of Skills (Figure 2 Box 4).....	142
Interpretation of Objective 4c Results: To Evaluate Application of Skills .....	151
General Evaluation: Participant Satisfaction .....	153
Interpretation of Participant Satisfaction .....	156
Phases 2 and 3 Study Limitations .....	157
Chapter 6.....	165
General Discussion .....	165
Further Evidence for EI Training.....	165
Program Implications: How did it work?.....	166
Possible Explanatory Mechanisms.....	166
Self-Reflection as a Possible Pathway .....	166
Practice as a Possible Pathway .....	168
Self-Efficacy as a Possible Pathway .....	169
Note on Stress, EI, and Coping.....	170
Other Considerations and Future Directions.....	171

How to Improve the Program and Evaluation.....	173
Further Implications: The Next Steps .....	174
References.....	176
Appendices.....	180
Appendix A: Additional Tables .....	180
Appendix B: Examples of Documents Handed in .....	190
Appendix C: Program Revisions .....	192
Program Revisions: Changes from Original Program to Program Version 1 .....	192
Further Program Revisions: Changes from Program Version 1 to 2 .....	192
Appendix D: Permission for Article Inclusions.....	195
Permission to include CJSP article (Vesely, Saklofske, & Leschied, 2013) .....	195
Permission to include PAID article (Vesely, Saklofske, & Nordstokke, 2013) .....	196
Curriculum Vitae.....	197

## List of Tables

Table 1: Means (M) and standard deviations(SD) for treatment (N=23) and control groups (N=26).....	80
Table 2: Reliability coefficients.....	81
Table 3: Intercorrelations among scales.....	84
Table 4: Number of Participants by Round of Data Collection (for Quantitative).....	91
Table 5: Means (M) and Standard Deviations (SD) for Program (N = 26-30) and Control Groups (N = 9-21) .....	107
Table 6: EI Subscale Means (M) and Standard Deviations (SD) for Program groups (N =29) .	108
Table 7: EI Subscale Means (M) and Standard Deviations (SD) for Program (N =24) and Control (N = mixed) groups.....	109
Table 8: Correlations of all variables at Time 1 (Pre-Program) .....	110
Table 9: Correlations of GENOS EI Facets at Time 1 (Pre-Program) .....	111
Table 10: Measures Used in Process Evaluation & Which Components Each Measures .....	116
Table 11: Fidelity of Content Presentation.....	124
Table 12: Practice Log Participation.....	127
Table 13: Most Significant Thing Learned by Session.....	130
Table 14: Understanding the Application of Information to situations .....	142
Table 15: Breakdown of Skills Practiced by Week .....	144
Table 16: Tendency to Assess Success of Weekly Activity .....	146
Table 17: Tendency to suggest ways to Improve.....	147

Table 18: Tendency to discuss level of Mastery.....	147
Table 19: Tendency to Discuss Difficulty .....	148
Table 20: Tendency to Discuss Personal Problems .....	149
Table 21: Tendency to describe Rationale behind goal .....	149
Table 22: Tendency to show a range of Attitudes .....	150
Table 23: How Reflection Paragraphs represent EI skills .....	151
Table 24: Program Satisfaction Responses from Final Feedback Questionnaire .....	154
Table 25: What Participants Liked Most about the EI program .....	155
Table 26: Program Component Descriptions and Examples .....	180
Table 27: Session Overviews and Components Involved in each Session.....	182
Table 28: Components of Original SSMP Program - Taken from Gardner (2005).....	184
Table 29: Description of and Rationale for Outcome Measures.....	185
Table 30: Skewness and Kurtosis Values as a measure of Normality .....	188

## List of Figures

Figure 1: Logic Model of Implementation.....	57
Figure 2: Causal Model - The Pathways.....	59
Figure 4: Dissertation Flow .....	72
Figure 5: GENOS EI Score Changes Across Two Time Points.....	96
Figure 6: GENOS EI Score Changes from Pre-Program to 6-month Follow-up .....	97
Figure 7: WLEIS Score Changes Across Two Time Points.....	98
Figure 8: WLEIS Score Changes From Pre-Program to 6-Month Follow-up.....	99
Figure 9: Satisfaction with Life Changes Across Two Time Points.....	100
Figure 10: Satisfaction with Life Changes Pre-Program to 6-Month Follow-up .....	100
Figure 11: Task Oriented Coping Across Two time Points.....	101
Figure 12: Task-Oriented Coping Pre-Program to 6-Month Follow-up.....	102
Figure 13: Avoidance-oriented Coping Across Two Time Points.....	103
Figure 14: Stress Across Two Time Points.....	104
Figure 15: Stress From Pre-Program to 6-month Follow-up.....	104
Figure 16: Teacher Efficacy Across Two Time Points.....	105
Figure 17: Teacher Efficacy from Pre-Program to 6-Month Follow-up.....	106
Figure 18: Homework Completion by Week.....	124
Figure 19: Weekly Effort Level of Homework Completion.....	124
Figure 20: Weekly Goal Completion.....	125

Figure 21: Reflection Completion by Week .....	125
Figure 22: Practice Completion by Week.....	126
Figure 23: Usefulness of Sessions by Week.....	129
Figure 24: Most Useful Topic (Percentage).....	130
Figure 25: Most and Least-Mastered Skill Post-Program.....	143

## **List of Appendices**

Appendix A: Additional Tables .....	180
Appendix B: Examples of Documents Handed in .....	190
Appendix C: Program Revisions .....	192
Appendix D: Permission to Include Journal Articles .....	195

## Chapter 1

### Introduction: Emotional Intelligence in the Context of Teaching

#### General Introduction & Overall Purpose

It is now well documented that a large number of teachers have difficulty coping with work related stress resulting from the emotional demands of their profession, leading to job dissatisfaction, mental health problems, and ultimately leaving the profession (e.g., Chan, 2006). Numerous programs, including those related to Emotional Intelligence (EI), that aid in the prevention and intervention of these negative consequences, have been administered (e.g., professional development). Despite the theoretical and empirical evidence supporting EI training for teachers, there remains a dearth of applicable theory-driven and empirically based training programs that are aimed at effectively managing teacher stress in the classroom. Further, there is limited information available on the potential processes that are related to how and why changes in EI may occur. This dissertation research yields a comprehensive, theory-driven evaluation of both the *short-term and intermediate outcomes* as well as the *processes* of an emotional intelligence training program that is aimed at improving stress management, generating successful coping, and increasing teacher efficacy in the teacher population.

Emotional intelligence (EI), which includes an array of emotional competencies that can facilitate the identification, processing, and regulation of emotion, may contribute to or underlie a large number of the positive factors comprising teacher efficacy (Vesely, Saklofske, & Leschied, 2013 – inserted below). Drawing upon research from psychology, education, and occupational management, it has been argued that having higher levels of EI can improve the management of stress, helping to facilitate effective teaching (Perry & Ball, 2005; Chan, 2006; Saklofske et al., 2012). Research has also shown that EI can be improved through specific EI-program training (Gardner, 2005), providing a foundation for enhancing teacher efficacy and general wellbeing.

The program evaluated within this dissertation is entitled, *Managing Occupational Stress Through the Development of Emotional Intelligence: A Professional Development Program for Teachers* (Gardner, Stough, & Hansen, 2008). The general program rationale is predicated on a need for advancing theory in developing teacher support and professional capacity during the teacher training practice period. The increasing attention being paid to research on school-based



mental health in both Canada and the United States has recently focused on the gap in support for teachers' psychological and physical health and wellbeing. Given the substantial research supporting the vital impact of effective teachers on positive student outcomes (Jennings & Greenberg, 2009; Yoon, 2002), the focus on the mental health of teachers is essential for the success of students, the education system, and ultimately, society. The subsequent sections will include background information related to each of the above claims and will also outline specific theories and objectives.

EI theory, using the Swinburne EI model (Gignac, 2008; Palmer & Stough, 2001) identifies how EI skills help individuals to improve in a variety of domains related to decisions, behaviors, and performance in the workplace. EI is theorized to aid teachers through increasing their ability to cope and manage stress. The comprehensive program evaluation aims to further understand these theoretical processes by addressing the 'how and why' of emotional intelligence training in addition to replicating training outcomes.

Chapter one discusses EI theory in general, literature support for EI training, and the propensity for the learning of EI skills. Chapter two provides an additional literature review and describes EI in the context of teaching and how it is empirically related to advancing stress management, coping ability, general wellbeing, and resilience, all of which is related to teacher performance. Chapter three introduces the conceptual framework surrounding the specific EI program theory and implementation. Given that implementation of the training program is divided into three phases of data collection, the subsequent chapters discuss these phases. Chapter four describes the phases of data collection and includes a detailed description of phase one, the pilot study, an outcome evaluation only. This provides the reader with an indication that the program is 'working' prior to the attempt to understand why. Chapter five includes phases two and three within the context of a comprehensive program evaluation including both a) an outcome evaluation (involving program outcomes related to psychological health and wellbeing of participants) and b) a process evaluation (results involving the fidelity of implementation and evaluation of possible pathways by which change may occur). While this research does not statistically assess the mechanisms involved in causality, the final chapter does provide a general discussion of this preliminary exploration of processes that influence EI with suggestions that inform theory-building and hypothesis testing with larger sample sizes.

### **Introduction to Emotional Intelligence – Background, Development, & Theory**

Despite controversy surrounding its definition and measurement, Emotional Intelligence (EI) has been established as a valuable construct with a wide range of evidence in support of its contribution to behavior and performance; there is convergence that EI is related to exceptionality such as higher academic achievement and better job performance (Bar-On, 2004; Schutte et al., 1998; 2007; Slaski & Cartwright, 2002; Zeidner et al., 2012). Theoretical and empirical investigations have postulated on the association between EI and various physical and/or psychological outcomes including satisfaction with life (e.g., Palmer, Donaldson, & Stough, 2002), coping and exam-related stress (Austin, Saklofske, & Mastoras, 2010), stress in the workplace (Slaski & Cartwright, 2002), leadership (George, 2000), motivation (Christie, Jordan, Troth, & Lawrence, 2007), and various clinical disorders (e.g., Hansen, Lloyd, & Stough, 2009; Vesely et al., 2014). This chapter serves to introduce EI prior to detailing the association between EI and teaching. This includes an overview of the background, development, and various theories of EI, in addition to a review of previous EI training.

### **Brief History**

Research studies over the past two decades have defined and theoretically described the construct of EI. Following its early reporting in 1990 (Salovey & Mayer, 1990), inquiries into potential implications for real world application of EI have received increased scholarly attention. The first conceptualization of EI by Salovey and Mayer (1990; p. 189) is described as the “ability to monitor one’s own and other’s feelings and emotions, to discriminate among them, and to use this information to guide one’s thinking and actions.” EI has been studied by numerous researchers who have discussed the validity of the construct and its relation to a range of applied disciplines including work, education, medicine, sports, and psychological practice (Stough et al., 2009).

The evolving definition of EI was heavily influenced by work focused on describing, defining, and assessing socially competent behavior such as social intelligence (Thorndike, 1920). These attempts to understand social intelligence led to further inquiries by theorists such as Gardner (1983) and Sternberg (1988), who proposed more inclusive approaches to understanding general intelligence. Gardner’s concepts of intrapersonal intelligence, namely the ability to know one’s emotions, and interpersonal intelligence which is the ability to understand

other individuals' emotions and intentions, aided in the development of later models of EI, even though the term itself was not used. Further 'prehistory' to EI involved the investigation of the relation of social intelligence to alexithymia, the inability to recognize, understand and describe emotions (e.g., MacLean, 1949; Ruesch, 1948), as well as research examining the ability to recognize facial emotions and expressions (Ekman, Friesen, & Ancoli, 1980).

It is important to note that in earlier work there was concern surrounding the compatibility between logic and emotion, and the potential interference of emotion in rational behaviour, as they were considered to be in 'opposition' (e.g., Lloyd, 1979). Research progressed into the study of how cognition and emotional processes could interact to enhance thinking (e.g., Bower, 1981; Zajonc, 1980). A distinction could be made between emotional responses at a more automatic/reflexive level that may arise once acute anxiety or rage-filled anger or other overwhelming emotions come to the forefront, and, the 'use' of emotions within a subset of skills, abilities, and/or traits. However, emotions such as volatile anger and the inability to control them can be viewed as characterizing low levels of EI, seen to represent a lack of an ability to use and manage emotion, and thus difficulty with integration of emotion and reason. Salovey and Mayer's (1990) original conceptualization of EI also addressed this debate by stressing that EI can be utilized in solving problems in addition to contributing to adaptive abilities such as the appraisal, expression, and regulation of emotions. On the other hand, there are automatic emotional responses that can also be highly adaptive at times.

EI was popularized by Daniel Goleman's (1995) best-selling book, *Emotional Intelligence: Why It Can Matter More Than IQ*, as well as through a number of other popular books (e.g., Cooper & Sawaf, 1997). However, the lack of empirical evidence available to support the 'exciting' statements and claims about the importance of EI in understanding human behavior and individual differences (Davies, Stankov, & Roberts, 1998) prompted further investigation into the construct. Major psychological factors such as ability, temperament, personality, information processing, and emotional self-regulation were considered in the conceptualization of EI, leading to a general consensus that it may be multi-faceted and could be studied from different perspectives (Austin, Saklofske, et al., 2005; Stough, Saklofske, & Parker, 2009; Zeidner, Roberts, & Matthews, 2008).

There are many challenges involved in the conceptualization of EI and difficulties remain in establishing criteria required for its accurate representation. For example, the debate remains regarding whether EI is a cognitive or non-cognitive construct; whether it refers to knowledge of emotion that is implicit or explicit; and whether it is a basic aptitude or malleable based on the individual's experiences, culture, and society (e.g., Zeidner, Matthews, & Roberts, 2001; Fiori & Ortony, 2014). Other questions include the extent to which moral and ethical behavior should be included in the EI construct, the relevance of the level of emotional competency required for a given context or specific interaction, and the method of evaluation of the construct (latter discussed in subsequent section; Caspi & Bem, 1990; Zeidner et al., 2008; 2012). A developmental perspective has also been thoroughly argued, one which has outlined a multi-level approach to explaining individual differences in EI involving innate biological attributes, effective learning of rule-based adaptive behaviors, and the development of self-reflective insight (see Zeidner, Matthews, Roberts, & MacCann, 2003). Such approaches attempt to resolve the ambiguities inherent in the EI construct by indicating different levels of emotion-regulation processes. More recent discussion has attempted to understand the components of the EI construct more completely by noting controversy surrounding differences between emotions involving the self versus those of others (Mikolajczak, 2014); differences between declarative and procedural emotion knowledge (Fiori & Ortony, 2014); and highlighting the distinction between emotion knowledge and application (Fiori, 2009; Montgomery, McCrimmon, Schwan, & Saklofske, 2010). The latter debate is mostly significant within the realm of measurement and will be considered in a relevant section that follows.

EI continues to generate increasing interest, prompting further publications and increasing debate (Stough et al., 2009). Two dominant theoretical frameworks have developed in the literature. These include *ability EI*, which was formulated from the Salovey-Mayer model (Mayer & Salovey, 1997) and *trait EI* that has been researched by individuals such as Bar-On (1997), Petrides and colleagues, and many others (Petrides & Furnham, 2001; Palmer and Stough, 2001). An integrative model, referred to as *the Tripartite Model*, has also been proposed in an attempt to reconcile controversy between these two perspectives (Mikolajczak, 2009; Mikolajczak, Petrides, Coumans & Luminet, 2009) and is considered in the ability section of this review. What all of these theoretical frameworks share in common is their conceptualization of EI as a distinct construct from traditional IQ and personality, which facilitates the potential for

prediction of, and influence on, various real-life outcomes (e.g., Ciarrochi, Chan, Caputi, 2000; Petrides, Pita, & Kokkinaki, 2007).

### **Theoretical Perspectives and Measurement**

In order to understand the application of EI in various domains, the two primary theoretical frameworks are outlined: ability EI and trait EI. The majority of research has conceptualized EI in ways that fit within one of these two models. However, some research attempts to integrate both ability and trait EI models either using a ‘mixed model’ approach, measured via self-report and discussed under the trait EI subsection (Bar-On, 2006) or using a ‘tripartite model,’ presented in the ability subsection (Mikolajczak, 2009).

The ability EI approach suggests that EI should be framed as ability because it is a form of intelligence. It specifies that cognitive processing is implicated in emotions, related to general intelligence, and should be assessed through performance measures (Freeland, Terry, & Rodgers, 2008; Mayer & Salovey, 1997).

The trait EI approach is related to personality (Petrides & Furnham, 2001) and most often focuses on the emotional self-efficacy of the individual that is measured through self-report scales (Palmer & Stough, 2001; Schutte et al., 2009).

**Ability Emotional Intelligence.** While a number of researchers (Petrides & Furnham, 2001; Schutte et al., 2009) have elected to discuss EI from the trait perspective, fewer individuals have attempted to characterize EI as a cognitive ability. Mayer and colleagues (1990; 1997) proposed a four-branch ability model, which has received wide acknowledgment and use. It remained until recently the only well-accepted model of ability EI. Although its corresponding ability-based EI measure has previously shown good psychometric validity and reliability (the Mayer-Salovey-Caruso Emotional Intelligence Test - MSCEIT; Mayer, Salovey, & Caruso, 2002), questions remain with regard to whether it is truly measuring ability (MacCann, 2014; Mikolajczak, 2014), as this measure has recently been shown to have a number of significant flaws (Fiori et al., 2014).

The Mayer et al. four-branch model identifies EI as being comprised of a number of skills that allow for the appraisal, expression, and regulation of emotion as well the integration of these emotions with cognitive processes used to promote growth and achievement (Salovey & Grewal,

2005; Salovey & Mayer, 1990). The hierarchical model is comprised of four linked psychological processes: perceiving, using, understanding, and managing emotions. These processes range from basic to more complex (Mayer & Salovey, 1997; Salovey & Grewal, 2005). The hierarchical nature of the model has been contradicted with the indications that a) developmental evidence suggests parallel relationships (see Zeidner et al., 2003), b) factor analysis in several cases, does not support a model with one underlying EI factor (Fiori & Antonakis, 2011; Rossen et al.; 2008), and c) a three-factor solution seems to provide a better fit to the data than a four-factor solution (e.g., Fiori et al., 2014; Keele and Bell, 2008), with “using emotions to facilitate thinking” being the factor that does not emerge as an independent subfactor. However, these four branches, as described in the next paragraph remain the foundation for current ability models and their description aids in the *theoretical* understanding of the general ability perspective.

*Perceiving* emotions refers to the ability to identify emotions accurately through the attendance, detection, and deciphering of emotional signals in one’s self and others (Mayer, Caruso, & Salovey, 1999; Papadogiannis, Logan, & Sitarenios, 2009). *Using* emotions involves the integration of emotions to facilitate thought. This occurs through analysis of, attendance to, or reflection on emotional information, which in turn assists cognitive activities such as reasoning, problem-solving, decision-making, and consideration of the perspectives of others (Mayer & Salovey, 1997; Mayer et al., 2002; Papadogiannis et al., 2009; Salovey & Mayer, 1990). *Understanding* emotions comprises the ability to comprehend the connections between different emotions (Rivers, Brackett, Salovey, & Mayer, 2007). This would involve knowledge of emotion language and its utilization to identify slight variations in emotion, and describe different combinations of feelings. Finally, *managing* emotions refers to the individual’s ability to understand and regulate his or her own emotions successfully. Such ability would entail the capacity to maintain, shift, and cater personal emotions, either positive or negative to a given situation (Rivers et al., 2007).

More recent research that describes this ability construct often follows the same theoretical composition of the four-branch model. However, the above-noted controversy surrounding the definition of ability has become more present in the literature (MacCaan, 2014; Mikolajczak, 2009; Fiori & Ortony, 2014). Specifically, the notion that ability EI may involve numerous separate entities, including having knowledge about emotion, as well as the ability to

apply that knowledge in practice. One means of addressing what constitutes this emotional competence is the proposal of a *tripartite model* of EI (Mikolajczak, Petrides, Coumans, & Luminet, 2009). This reconciles the controversy by suggesting three levels of EI. These include knowledge - reflecting what people know about emotions, the ability to apply this knowledge in real-world situations, and, traits - which reflects the propensity to behave in a certain way in emotional situations (typical behavior). Research on this tripartite model is currently underway.

***Measuring Ability EI.*** The corresponding measure of the dominant-to-date theoretical model of ability EI (Salovey & Mayer, 1997) is the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2002). This is a performance-based measure with the goal to provide a comprehensive coverage of ability EI by assessing how people perform tasks and solve emotional problems. This measure uses visuals and vignettes that are based on the framework from the four-factor model, with multiple subtests representing each of the four abilities, perceiving, using, understanding, and managing emotions. Since the model claims that EI is related to cognitive ability, the test follows the model of an ability-based IQ test, while also requiring the individual to be attuned to social norms (Salovey & Grewal, 2005). The responses are given in an incorrect/correct choice format rather than asking individuals for their own assessment of emotional sensitivity. Scores are calculated based on the congruence with the answers of emotion experts or consensus, and responses are thus deemed correct if they match the criteria as set by the expert raters (Mayer, Salovey, Caruso, & Sitarenios, 2003; Papadogiannis et al., 2009; Salovey & Grewal, 2005).

Given the mono-measurement of ability EI for such a long period of time, MacCann and Roberts (2008) identified the need to develop further instruments to generalize findings across instruments and to create non-commercial alternatives for research. The Situational Test of Emotional Understanding (STEU; Allen, Weissman, Hellwig, MacCann, & Roberts, 2014) is one test among numerous developed subsequently to address a range of issues with ability measurement. These issues are discussed for both EI types in the controversy section below.

***Trait Emotional Intelligence.*** Numerous researchers have generated models consistent with the trait conceptualization of EI. In contrast to ability EI, trait EI has a personality-based competency, with minimal relation to cognitive abilities. It is comprised of a set of skills that allows individuals to cope with their social environment (Bar-On, 1997; Ciarrochi, et al., 2000).

A variety of researchers have identified different factors that comprise this EI construct. However, trait EI is generally comprised of subfactors alluding to the individual's self-perceptions of his or her emotional abilities. Petrides and colleagues define trait EI as a "constellation" of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides & Furnham, 2001; Petrides, Pita, & Kokkinaki, 2007). In contrast to fitting within the construct of cognitive ability, this conceptualization of EI comprises personality facets specifically related to affect (Petrides, Perez-Gonzalez, & Furnham, 2007; Petrides, Pita et al., 2007). However, contrasting the common criticism that trait EI is merely a rework of major personality dimensions (Zeidner et al., 2008), numerous studies have demonstrated the incremental validity of trait EI above and beyond established trait hierarchies such as the Big Five and the Eysenckian three-factor model (e.g., Petrides, Perez-Gonzales, et al., 2007; Petrides, Pita, et al., 2007).

Similarly, the conceptualizations of trait EI by both Bar-On (1997; 2006) and Goleman (1995) refer to EI as inclusive of characteristics such as self-awareness, adaptability, impulse control, empathy, self-motivation, and intrapersonal skills, among other things. Further, although Schutte, Malouf, and Bhullar's (2009) conceptualization is drawn from Mayer and Salovey's (1990) original ability model of EI, it refers to the display of emotional characteristics in daily life, thus deeming it a trait model. A similar model, the Swinburne model, which was used as the foundation of the program in the present research, is categorized under the trait framework and was developed in the context of workplace management (Palmer & Stough, 2001; Gignac, 2008). It identifies factors that comprise the EI construct alluding to the individual's self-perceptions of his or her emotional abilities in the workplace and is described in detail in a following section (Gignac, 2008). Additionally, Goleman's later model views the expression of emotions as a domain of intelligence, reasoning that EI reflects a wide area of competencies and skills that drive, for example, managerial performance (Boyatzis, Goleman, & Haygroup, 2001). This once again may confuse the distinction between trait and ability models.

It is noteworthy that trait conceptualizations of EI have been further divided into the trait approach and the mixed model (or 'competency') approach (Freeland, et al., 2008). The notion of the latter denotes that EI and cognitive intelligence contribute equally to an individual's general intelligence, which, in turn, relates to his or her potential for success in life (Bar-On, 1997). The mixed model approach can refer to the explicit inclusion of non-EI dimensions such



as personality dimensions or competencies that are combined with EI-dimensions (Gignac, 2008). Caruso (2004) differentiates between these approaches specifying that models focused on personality and dispositional traits fall under the trait approach and those focused on leadership competency and performance, fall under the mixed approach. However, given that both trait and mixed models are measured via self-report, trait EI is utilized as an umbrella term for both approaches (Zeidner et al., 2008). This does not resolve the controversy surrounding the distinction between the conceptualizations of trait and ability, but does provide terminology for their generalized description and discussion.

***Measuring Trait EI.*** Congruent within the larger number of models in the trait domain, a wider range of questionnaires have developed in order to measure trait EI, some of which were created for use in specific settings such as the workplace (Petrides, 2009a; Schutte, et al., 2009; Palmer, Stough, Harmer, & Gignac, 2009). Examples of self-report questionnaires created to reflect the trait EI construct include the Emotional Intelligence Questionnaire (EIQ; Dulewicz & Higgs, 1999), the Swinburne University Emotional Intelligence Test (SUEIT; Palmer & Stough, 2001), the updated version of it, the GENOS (Gignac, 2008), and the Emotional Competency Inventory, version 2 (ECI-2; Goleman, Boyatzis, and McKee, 2002). The ECI-2 is an upgrade of a previous measure following a newer version of Goleman's (1995) original model in combination with results of research on management competencies (Boyatzis, Stubbs, & Taylor, 2002).

An often-used measure of trait EI is the Schutte Emotional Intelligence Scale (Schutte et al., 1998; 2009). It is based on the notion that ability and trait EI are both important and complementary dimensions of adaptive emotional functioning. The Bar-On Emotional Quotient Inventory (EQ-i; Bar-On, 1997) is a highly recognized measure that is based on a mixed model. It attempts to assess ability through self-perception measures, and includes three classes of constructs; perceived emotional abilities, competencies, and personality traits (Bar-On, 1997; Brackett et al., 2006).

Petrides and colleagues (2009b) developed the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009b), a trait-based measure, which focuses on integrating the understanding of EI into personality hierarchies (Petrides, Pita et al., 2007). The latest version of the TEIQue generates scores on 15 facets, four factors (Well-Being, Self-Control, Emotionality,

Sociability), and global trait EI. As research in EI continues to develop, issues with measurement continue to be addressed.

### **Controversy and Issues with Construct and Measurement**

The presentation of these two main theoretical frameworks has evoked considerable debate among researchers as to whether, broadly speaking, EI can be either a single construct or two or more separate constructs (e.g., Zeidner et al., 2008). A large part of this controversy results from studies examining the association between trait and ability EI which have suggested low, but significant positive correlations ranging from 0.2 - 0.3 (Brackett & Mayer, 2003; Vesely, 2011). This can be interpreted as supporting the notion of different constructs; however, each EI total score (or level of EI) is heavily dependent upon how it is measured. An argument can therefore be made that it is not the theoretical constructs that are unique but the means of measurement that cause the implied discrepancy.

How EI is measured is critically important to how the results are interpreted and is discussed in detail in the section that follows. The fact that ability EI is measured by maximum-performance tests, whereas trait EI is assessed by self-report questionnaires can, in itself, lead to different results (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). Thus, it is challenging to determine whether the results are attributed to the construct itself, or to the assessment methods that are being used (MacCann & Roberts, 2008). This is analogous to asking people to provide evidence of their intelligence by utilizing a performance IQ measure versus asking them how high they think their IQ is. Although most individuals have insight with regard to their own intellect, there are those who do not. There, of course, are others who over or underestimate their IQ unintentionally or for social desirability purposes, resulting in different scores depending on the tool of measurement. Though this IQ example is referring to empirically acknowledged problems with self-report measures in general, reflected in vulnerability to faking/social desirability, and ecological validity (Grubb & McDaniel, 2001; Roberts et al., 2007), problems with performance measures in the area of EI that may alter the response outcome also exist. Whereas performance IQ is a widely accepted and standardized measure shown to be stable across the life course and representative of the individual's basic cognitive abilities (Prifitera, Saklofske, & Weiss, 2008), there remain challenges in measurement of ability EI.

This dilemma is reflected in the subscales on the MSCEIT which asks individuals to demonstrate their 'ability' to perceive, respond to, understand, and manage emotions within a variety of hypothetical scenarios and visual stimuli, thus deeming the incorrect/correct response format as a method of performance. More specifically, this test measures emotional knowledge and the individual's ability to reason with and manipulate knowledge in a controlled test environment. This is in contrast to what might be observed and inferred from true social interactions. Although this may correlate with real-life outcomes, it may not be an accurate representation of EI application (Vesely, 2011). This notion has recently been discussed in drawing the distinction between procedural and declarative emotion knowledge and the notion that measures like the MSCEIT measure solely the latter (Fiori, 2009). In other words, ability measures may capture only the knowledge aspects of emotional ability, which can be distinct from real-life social-emotional interaction (Fiori, 2009; Vesely, 2011). This disconnect between emotional knowledge and application of knowledge is also supported by Tatton's (2005) distinct categories for demonstration of emotional knowledge in role-based simulations. Further support comes from the reasoning behind the tripartite model of EI described above (Mikolajczak et al., 2009), which separates the knowledge and application of traits within its theory. For example, it posits the possibility that cognitive knowledge and verbal ability can describe which emotional expression would be useful in a given situation, without being able to select or even display the corresponding emotion.

Controversies such as these provide further insight into both the understanding of each EI conceptualization as well as to the interpretation of results from each method of EI measurement. It draws a distinction between trait and ability EI causing researchers to reconsider whether a high score on this performance-based EI measure necessarily results in enhanced performance in a naturalistic setting or merely represents knowledge about how to problem-solve emotionally-based scenarios. In contrast to this, self-report EI measures, despite a risk of faking or misinterpreting emotional effectiveness, assess individual EI or emotional success in reference to real-world behaviour. This alludes to the fact that each measure of existing EI may theoretically describe the construct effectively, but may not fully reflect it through measurement.

Both broad domains of EI theoretically describe the same content domain, or at least have a large range of overlap, in spite of the low correlations between them. It can be argued that both trait and ability EI conceptualizations are more complementary than contradictory (Ciarrochi et

al., 2000). For example, it is possible to map subfactors of one EI model onto other EI models. Comparing the MSCEIT (ability) theoretically to the TEIQue (trait) as an example, there may be a place for each of the facets of the TEIQue within each of the four main factors of the MSCEIT. For instance, ‘emotion appraisal of the self and others’ fits under the ‘perceiving’ emotions factor as described by Mayer and colleagues (1997; 2002). The above illustrates again that the poor convergence between self-report and performance-based measures of EI may not be a reflection of conceptual differences between trait and ability EI, but largely a difference in the method of measurement (Brackett & Mayer, 2003; O’Connor & Little, 2003; Warwick & Nettelbeck, 2004). One may also acknowledge other partial reasoning for poor convergence between measures, for example, the broader nature of trait versus ability measures, which would lead to less general overlap (Fiori & Antonakis, 2011).

Despite the notion that ability EI is described as a cognitive capacity and that trait EI is considered a personality trait, it is without dispute that both conceptualizations view EI generally as representing a set of competencies. Specifically, each is considered a construct describing the capacity to apply knowledge of emotions to both the self and others, while also bearing in mind that the manifestation of EI reflects experience and contextual variables. It is challenging to distinguish whether a display of emotional competencies represents personality characteristics, cognitive capacities, experience, or the interaction of all three since it would appear that each provides a contribution for such competencies. For the purpose of this dissertation, it is acknowledged that while different theoretical conceptualizations of EI have been proposed, there are limitations to each one. It is reasoned that trait and ability conceptualizations are more similar than they are different, and indeed describe an overarching concept much like general mental ability in intelligence models. In other words, while there are some differences often differentiating them as constructs, they draw from the same content domain. The primary point of incongruence is in how EI is measured.

The model of EI used as a foundation for the development of the EI program administered throughout the present studies is drawn from the Swinburne model (Gignac, 2008; Palmer & Stough, 2001; Palmer et al., 2009), described in detail in Chapter 3. This trait model was chosen with the awareness that current measures of ability EI do not seem to accurately measure ecologically valid EI skills. Given the use of EI self-efficacy and other constructs measured via self-report in this dissertation, it is important to emphasize that despite the trait

model not being a direct measure of ‘performance’, in the context of the extant issues with self-report (e.g., Roberts et al., 2007), self efficacy has been shown to have an impact on objective behavior (Keefer, 2015). Research using EI self-efficacy as an outcome variable, for example, is based on the empirically supported notion that EI self-efficacy has been shown to impact objective EI when assessed by a third-party rater (Keefer, Parker, Wood, & Stone, 2014). The final section of this chapter contains a review of recently assessed EI training programs with a focus on outcomes of trait EI as well as other outcome variables.

### **Moving Forward: EI Training**

In order to lead into the notion of EI training in the context of teaching, it is necessary to provide a foundational understanding of previously implemented EI training programs and their effectiveness. The professional development EI programs in general, and those specifically developed for teachers are summarized in the publication below (*chapter 2*). This next section provides a review of more recent EI and EI-relevant training programs, not discussed in *chapter 2*. Subsequently, a detailed outline of the program theory is presented in *chapter 3*.

### **Review of Additional EI Training Programs**

To take advantage of the benefits of higher EI that are related to psychological health and wellbeing, there is evidence that EI can be developed through EI-program training. As will be described in the *chapter 2* article (Vesely, Saklofske & Leschied, 2013), previous research (Humphrey et al., 2007) has acknowledged the controversy in examining EI as a malleable construct; however, more and more programs are identifying that training can improve skills required for emotional competencies (Gardner, 2005). Given that the development of EI skills in childhood have their own trajectory (Zeidner, Matthews, Roberts, & MacCann, 2003) and that the reporting of changes in trait EI may have characteristic implications for children and adolescents (Keefer, 2013), the current literature review will focus on EI enhancement in adults only.

A variety of programs attempting to improve EI skills in its participants have been developed. A number of the EI programs that will be mentioned in *chapter 2*, for example Mindfulness-Based EI training (Ciarrochi, Blackledge, Bilich, & Bayliss, 2007) are based on ability-EI foundations using the consequent measurement. More relevant to this dissertation however, is the finding that trait EI was more often measured as the main outcome variable using

self-report measures. The majority of studies assessing trait EI at the conclusion of EI training programs have indicated positive results (90%), namely that there was an increase in EI scores after program completion (Kotsou, Mikolajczak, Grégoire, Heeren & Leys, in press). Of the two studies that utilized a teacher population, one assessed the development of emotional competencies in primary school teachers, showing an increase in participants' EI using the Emotional Development Inventory for Adults (CDE-A) as well as a decrease in stress and improvement in relational climate in schools (Pérez-Escoda, Filella, Alegre, & Bisquerra, 2013). This study administered one hour a week of training for 30 weeks, which focused on awareness, emotional regulation, personal autonomy, social competence, and life competencies. The second study on teachers examined EI training administered across 14 weeks (56 hours), and showed an increase in EI and empathic concern (Hen & Sharabi, 2013) upon program completion using the Schutte Self-Report Emotional Intelligence Test (SSREIT); however, this study did not have a control group.

It is important to note that, of the numerous reviewed studies, many include significant limitations such as a lack of control group (46%), lack of follow-up to measure longer-term changes (63%), or failure to utilize theory- and/or evidence-based training (75%; Kotsou et al., in press). However, there exist a number of studies that are not limited in similar ways (e.g., Karahan & Yalcin, 2009; Kotsou et al., 2011; Nelis et al. 2009, Nelis et al. 2011; Sharif et al., 2013; Slaski & Cartwright, 2003; Vesely, Saklofske, & Nordstokke, 2014 [included in Chapter 4] 2014; Yalcin, Karahan, Ozcelik, & Igde, 2008), suggesting that there is the possibility of improving trait EI through training (Kotsou et al., in press). Training in these studies was based on content involving components specifically theorized as EI though spanning across different time periods from a 2-day workshop to 12-week training. The programs administered included at least two of the three dimensions of identification, expression, or regulation of emotions (Mikolajczak, 2015). Most of these evaluated programs were designed around five dimensions that included identification, understanding, use, expression, and regulation of emotions (Mikolajczak, 2015), though some programs include up to seven dimensions (Vesely et al., 2014) or incorporate theory around other emotional competencies such as detachment (Slaski & Cartwright, 2003). Most programs include a psychoeducational or teaching component of EI theory and technique in addition to experiential teaching methods such as discussions, activities,

role-play, and self-reflection. Generally, these programs showed an average EI improvement of 12.4% (measure by the TEIQue or EQ-I; Mikolajczak, 2015).

The EI program used as the foundation for this study is based in the Swinburne (GENOS) model titled, *Managing Stress through developing Emotional Intelligence: A Professional Development Program for Teachers* (Gardner, Hansen, & Stough, 2008). This program addresses teachers specifically, with the ultimate goal of decreasing teacher stress and burnout while improving overall teacher efficacy and classroom outcomes. Though evaluations of this program have shown it to be effective overall in providing evidence for the malleability of EI (Gardner, 2005; Poole & Saklofske, 2009), a comprehensive evaluation of the program process as well as the range of outcomes has yet to be examined.

The following chapter (2) is an article previously published in the *Canadian Journal of School Psychology*, which furthers this introduction by shifting the focus to the more specific context of teaching. It reviews the empirical connection between EI and effective teaching and details the utility of EI skills in the lives of teachers. The focus begins with the fundamental, yet laborious role of teaching and moves forward to describe why EI may aid with stress management and thus, more effective teaching. *Chapter 3* then discusses the specifics of the EI program and the present research.

### References

- Ashkanasey, N. M., & Daus, C. S. (2005). Rumors of the death of emotional intelligence in organizational behavior are vastly exaggerated. *Journal of Organizational Behavior*, 26, 441-452.
- Austin, E. J. Saklofske, D. H., & Egan, V. (2005). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences*, 38, 547-558. doi:10.1016/j.paid.2004.05.009
- Austin, E. J., Saklofske, D. H., & Mastoras, S. M. (2010). Emotional intelligence, coping and exam-related stress in Canadian undergraduate students. *Australian Journal of Psychology*, 62, 42-50. doi:10.1080/00049530903312899
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice- Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28, 117-148.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.
- Barfield, V., & Burlingame, M. (1974). The pupil control ideology of teachers in selected schools. *Journal of Experimental Education*, 42, 6-11.
- Bar-On, R. (1997). *The Emotional Quotient Inventory (EQ-i): A test of emotional intelligence*. Toronto: Multi-Health Systems.
- Bar-On, R. (2004). The Bar-On Emotional Quotient Inventory (EQ-i): Rationale, description, and summary of psychometric properties. In G. Geher (Ed.), *Measuring emotional intelligence: Common ground and controversy* (pp.111-142). Hauppauge, NY: Nova Scotia Science Publishers.
- Bar-On, R. (2006). The Bar-On model of Emotional-Social Intelligence (ESI), *Psicothema*, 18, 13-25. Retrieved from <http://www.ressourcesetmanagement.com/Article%20prof%20%20Baron%20.pdf>
- Bower, G. H. (1981). Mood and memory. *American Psychologist*, 36, 129-148.
- Boyatzis, R. E. (1994). Stimulating self-directed change: A required MBA course called Managerial Assessment and Development. *Journal of Management Education*, 18, 304-323.



- Boyatzis, R. E. (2007). Developing Emotional Intelligence Competencies. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying Emotional Intelligence: A Practitioner's Guide* (pp. 28–52). New York: Psychol. Press/Taylor & Francis.
- Boyatzis, R. E., Goleman, D., & Haygroup (2001). *The Emotional Competence Inventory (ECI)*. Boston: Haygroup.
- Boyatzis, R. E., Stubbs, E., & Taylor, S. (2002). Learning cognitive and emotional intelligence competencies through graduate management education. *Academy of Management Learning and Education, 1*, 150-162. doi:10.5465/AMLE .2002.8509345
- Brackett, M. & Katulak, N.A. (2007). Emotional intelligence in the classroom: skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying Emotional Intelligence: A Practitioner's Guide* (pp. 28–52). New York: Psychol. Press/Taylor & Francis.
- Brackett, M. A., Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin, 29*, 1147-1158.
- Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary-school teachers. *Psychology in the Schools, 47*, 406-417.
- Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology, 91*, 780-795. doi:10.1037/0022-3514.91.4.780
- Brackett, M. A., Rivers, S. E., & Salovey, P. (2011). Emotional intelligence: Implications for personal, social, academic, and workplace success. *Social and Personality Psychology Compass, 5*, 88-103.
- Brennan, K. (2006). The managed teacher: Emotional labour, education, and technology. *Educational Insights, 10*, 55–65.
- Brown, E. L. (2011). *Emotion matters: Exploring the emotional labour of teaching* (Doctoral dissertation). Retrieved from <http://d-scholarship.pitt.edu/7209/>
- Brunetti, G. J. (2006). Resilience under fire: Perspectives on the work of experienced, inner city high school teachers in the United States. *Teaching and Teacher Education, 22*, 812-

825.

- Caruso, D. R. (2004). *Comment on R. J. Emmerling and D. Goleman, Emotional intelligence: Issues and common misunderstandings*. Retrieved February 2, 2010, from the Consortium for Research on Emotional Intelligence in Organizations Web site: <http://www.eiconsortium.org/>
- Caspi, A., & Bem, D. (1990). Personality, continuity, and change across life course. In L. A. Pervin (Ed.), *Handbook of personality theory and research* (pp.549-575). New York: Guilford.
- Chan, D. (2006). Emotional intelligence and components of burnout among Chinese secondary school teachers in Hong Kong. *Teaching and Teacher Education*, 22, 1042-1054.
- Cherniss, C., & Adler, M. (2000). *Promoting emotional intelligence in organizations: Make training in emotional intelligence effective*. Washington, DC: American Society if Training and Development.
- Christie, A., Jordan, P., Troth, A., & Lawrence, S. (2007). Testing the links between emotional intelligence and motivation. *Journal of Management and Organization*, 13, 212-226. Retrieved from <http://jmo.e-contentmanagement.com/>
- Ciarrochi, J., Blackledge, J., Bilich, L, & Bayliss, V. (2007). Improving emotional intelligence: A guide to Mindfulness-Based Emotional Intelligence Training. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying Emotional Intelligence: A Practitioner's Guide* (pp. 89–124). New York: Psychol. Press/Taylor & Francis.
- Ciarrochi, J. V., Chan, A. Y. C., & Caputi, P. (2000). A critical evaluation of the emotional intelligence construct. *Personality and Individual Differences*, 28, 539-561. doi:10.1016/S0191-8869(99)00119-1
- Ciarrochi, J., & Mayer, J. D. (2007). The key ingredients of emotional intelligence interventions: Similarities and differences. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying Emotional Intelligence: A Practitioner's Guide* (pp. 144–156). New York: Psychol. Press/Taylor & Francis.
- Cooper, R. K. & Sawaf, A. (1997). *Executive EQ: Emotional intelligence in leadership and organizations*. New York: Grosset/Putnam.
- Davies, M., Stankov, L., & Roberts, R. D. (1998). Emotional intelligence: On search of an

- elusive construct. *Journal of Personality and Social Psychology*, 75, 989-1015.  
doi:10.1037//0022-3514.75.4.989
- Downey L., Johnston, P.J., Hansen, K., Birney, J. & Stough, C. (2010). Investigating the mediating effects of emotional intelligence and coping on problem behaviours in adolescents. *Australian Journal of Psychology*, 62, 20-29.
- Dulewicz, V., & Higgs, M. (1999). *Emotional intelligence questionnaire and user's guide*. London: ASE/NFER Nelson.
- Ellis, A. (1973). *Humanistic Psychotherapy: The Rational-Emotive Approach*. New York: The Julian Press, Inc.
- Fiori, M. (2009). A new look at emotional intelligence: a dual process framework. *Personality and Social Psychology Review*, 13, 21-44.
- Fiori, M., Antonietti, J.P., Mikolajczak, M., Luminet, O., Hansenne, M. & Rossier, J. (2014). What Is The Ability Emotional Intelligence Test (MSCEIT) Good For? An evaluation using Item Response Theory. *PLoSOne*, DOI: 10.1371/journal.pone.0098827
- Fiori M. & Antonakis J. (2011). The ability model of emotional intelligence: Searching for valid measures. *Personality and Individual Differences*, 50, 329-334.
- Fiori, M., & Ortony, A. (July, 2014). *The limits of emotion knowledge in predicting emotionally intelligent behavior*. Symposium presented at the European Conference on Personality, Lausanne, CH.
- Freeland, E. M., Terry, R. A., & Rodgers, J. L. (2008). Emotional intelligence: What's in a name? In J. C. Cassady, & M. A. Eissa (Eds.), *Emotional intelligence: Perspectives on educational and positive psychology* (pp. 93-117). New York, NY, US: Peter Lang Publishing. US.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Gardner, L. (2005). *Emotional Intelligence and Occupational Stress* (Unpublished dissertation). Hawthorn, Australia: Swinburne University of Technology.
- Gardner, L. (2006). Emotional intelligence and occupational stress. In Stough, C., Saklofske, D.H., & Hansen, K. (Eds.) *Emotional Intelligence: International Symposium* (pp. 169-195). Croydon: Tertiary Press.
- Gardner, L., Stough, C., Hansen, K. (2008). *Managing Occupational Stress through the*

- development of Emotional Intelligence*. Professional Development Program for Teachers. Swinburne, Australia.
- Goleman, D. (1995). *Emotional Intelligence: Why it can matter more than IQ*. New York: Bantam Books.
- Goleman, D., Boyatzis, R., & McKee, A. (2002). *Primal leadership: Realizing the power of emotional intelligence*. Boston: Harvard Business School Press.
- Gottfredson, L. S. (2008). Of what value is intelligence? In A. Prifitera, D. H. Saklofske, & L. G. Weiss (Eds.), *WISC-IV clinical assessment and intervention (2nd ed.)* (pp. 545-563). New York, NY: Elsevier.
- Gottfredson, L. & Saklofske, D. H. (2009). Intelligence: Foundations and issues in assessment. *Canadian Psychology, 50*, 183-195. doi:10.1037/a0016641
- Grandey, A. A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology, 5*, 95-110.
- Grubb III, 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. doi:10.1207/s15327043hup2001\_3
- Hansen, K., Gardner, L., & Stough, C. (2007). Improving occupational stress through emotional intelligence development. *Organizations and People, 14*, 70-75.
- Hansen, K. (2010). *Emotional intelligence in the classroom*. Melbourne: Swinburne University.
- Hansen, K. Lloyd, J., & Stough, C. (2009). Emotional intelligence and clinical disorders. In C. Stough, D. H. Saklofske, & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, research, and applications* (pp. 219-237). New York: Springer. doi:10.1007/978-0-387-88370-0\_12
- Hen, M., & Sharabi-Nov, A. (2014). Teaching the teachers: emotional intelligence training for teachers. *Teaching Education*(ahead-of-print), 1-16.
- Humphrey, N., Curran, A., Morris, E., Farrell, P., & Woods, K. (2007). Emotional intelligence and education: A critical review. *Educational Psychology, 2*, 235-254.
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research, 79*, 491-525. doi:10.3102/0034654308325693
- Karahan, T. F., & Yalcin, B. M. (2009). The effects of an emotional intelligence skills training

- program on anxiety, burnout and glycemic control in type 2 diabetes mellitus patients. *Turkiye Klinikleri Journal of Medical Sciences*, 29(1), 16-24.
- Kokkinos, C. M., (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology*, 77, 229-243.
- Kornacki, S. A., & Caruso, D. R. (2007). A theory-based, practical approach to emotional intelligence training: Ten ways to increase emotional skills. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying Emotional Intelligence: A Practitioner's Guide* (pp. 53–88). New York: Psychol. Press/Taylor & Francis.
- Keefer, K. (2013). *Longitudinal Dynamics of Trait Emotional Intelligence: Measurement Invariance, Construct Stability, and Mean Level Change from Late Childhood to Adolescence (Unpublished dissertation)*. Ontario, Canada: Queens University.
- Keefer, K. V. (2015). Self-Report Assessments of Emotional Competencies: A Critical Look at Methods and Meanings. *Journal of Psychoeducational Assessment*, 33, 3-23.
- Keefer, K.V., Parker, J.D.A, Wood, L.M., & Stone, H.E. (2014, June). *Improving emotional intelligence of school administrators: Outcomes of a 2-year professional development program*. Paper in a symposium on “Emotional intelligence for school professionals: Opportunities, challenges, outcomes”, presented at the 75<sup>th</sup> convention of the Canadian Psychological Association, Vancouver, BC.
- Keele, S. M., & Bell, R. C. (2008). The factorial validity of emotional intelligence. An unresolved issue. *Personality & Individual Differences*, 44, 487–500.
- Kotsou, I., Mikolajczak, M., Grégoire, J., Heeren & Leys, C. (in press). Improving emotional competence: A systematic review of existing work and future challenges. *Emotion Review*.
- Kotsou, I., Nelis, D., Gregoire, J., & Mikolajczak, M. (2011). Emotional Plasticity: Conditions and Effects of Improving Emotional Competence in Adulthood. *Journal of Applied Psychology*, 96(4), 827-839. doi: 10.1037/a0023047
- Lopes, P. N., Cote, S., & Salovey, P. (2006). An ability model of emotional intelligence: Implications for assessment and training. In V. Druskat, F. Sala, & G. Mount (Eds.), *Linking emotional intelligence and performance at work* (pp. 53-80). Mahwah, NJ: Lawrence Erlbaum Associates.
- Maag, J. W. (2008). Rational-emotive therapy to help teachers control their emotions and

- behaviour when dealing with disagreeable students. *Intervention in School and Clinic*, 44, 52-57. doi:10.1177/1053451208318680
- MacCann, C. (2014). *Assessing ability-based EI with situational judgment tests*. Symposium presented at the bi-annual European Conference on Personality, Lausanne, CH.
- MacCann, C. & Roberts, R. D. (2008). New paradigms for assessing emotional intelligence: Theory and data. *Emotion*, 8, 540-551. doi:10.1037/a0012746
- MacLean, P. D. (1949). Psychosomatic disease and the visceral brain: recent developments bearing on the Papez theory of emotion. *Psychosomatic Medicine*, 11, 338-353.
- Maslach, C. (1999). Progress in understanding teacher burnout. In R. Vandenberghe & A. M. Huberman (Eds.), *Understanding and preventing teacher burnout* (pp. 211-222). UK: Cambridge University Press.
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). Maslach Burnout Inventory. In C. P. Zalaquett & R. J. Wood (Eds.), *Evaluating stress: A book of resources* (pp.191-218). Lanham, MD: Scarecrow Education.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, & D. J. Sluyter (Eds.), *Emotional development and emotional intelligence: Educational implications* (pp. 3-34). New York, NY, US: Basic Books.
- Mayer, J. D., Caruso, D., & Salovey, P. (1999). Emotional intelligence meets traditional standards for intelligence. *Intelligence*, 27, 267-298. doi:10.1016/S0160-2896(99)00 016-1
- Mayer, J. D., Salovey, P., & Caruso, D. (2002). *Mayer-Salovey-Caruso Emotional Intelligence Test manual*. Toronto: Multi-Health Systems.
- Mayer, J., Salovey, P., & Caruso, D. (in press). Mayer-Salovey-Caruso Emotional Intelligence Test: Youth Version-Research Edition (MSCEIT-YV (R)). Toronto, Ontario: Multi-Health Systems, Inc.
- Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2003). Measuring emotional intelligence with the MSCEIT V2.0. *Emotion*, 3, 97-105. doi:10.1037/1528-3542.3.1.97
- McEwan, H., & Bull, B. (1991). The pedagogic nature of subject-matter knowledge. *American Educational Research Journal*, 28, 316-334.
- McIntyre, T., & Battle, J. (1998). The traits of "good teachers" as identified by African-American

- and white students with emotional and/or behavioral disorders. *Behavioral Disorders*, 23, 134-142.
- Mikolajczak, M. (2015). On the efficacy of emotional intelligence training in adulthood. *Emotion Researcher*, Andrea Scarantino (ed.), <http://emotionresearcher.com/on-the-efficiency-of-emotional-intelligence-training-in-adulthood/>, accessed April 15, 2015.
- Mikolajczak, M. (2009). Moving beyond the ability-trait debate: A three level model of emotional intelligence. *E-Journal of Applied Psychology*, 5, 25-31.
- Mikolajczak, M. (July, 2014). *Emotional competence and health: Relationships, pathways, and interventions*. Presented at the European Conference on Personality, Lausanne, CH.
- Mikolajczak, M., Petrides, K.V., Coumans, N., & Luminet, O. (2009). An experimental investigation of the moderating effects of trait emotional intelligence on laboratory-induced stress. *International Journal of Clinical and Health Psychology*, 9, 455-477.
- Montgomery, J. M., McCrimmon, A. W., Schwean, V. L. & Saklofske, D. H. (2010). Emotional intelligence in Asperger Syndrome: Implications of dissonance between intellect and affect. *Education and Training in Autism and Developmental Disabilities*, 45(4), 655-582.
- Nelis, D., Kotsou, I., Quoidbach, J., Hansenne, M., Weytens, F., Dupuis, P., & Mikolajczak, M. (2011). Increasing Emotional Competence Improves Psychological and Physical Well-Being, Social Relationships, and Employability. *Emotion*, 11(2), 354-366. doi: 10.1037/a0021554
- Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences*, 47, 36-41.
- Nikolaou, I. (2002). Emotional intelligence in the workplace: Exploring its effects on occupational stress and organizational commitment. *International Journal of Organizational Analysis. Special Issue on Emotional Intelligence*, 10, 327-342.
- Nisbett, R. E., Aronson, J., Blair, C., Dickens, W., Flynn, J., Halpern, D. F., & Turkheimer, E. (2012). Intelligence: New Findings and Theoretical Developments. *American Psychologist*. 67, 130-159.
- Nucci, C. (2002). The rational teacher: Rational Emotive Behaviour Therapy in teacher education. *Journal of Rational-Emotive & Cognitive-Behaviour Therapy*, 20, 15-32.
- Palmer, B. R. (2007). Models and measures of emotional intelligence. *Organizations and*

- People, 14, 3–10.
- Palmer, B. R., Donaldson, C., & Stough, C. (2002). Emotional intelligence and life satisfaction. *Personality and Individual Differences*, 33, 1091-1100.  
doi:10.1016/S0191-8869(01)00215-X
- Palmer, B. R., & Stough, C. (2001) *The Swinburne University Emotional Intelligence Test (SUEIT) technical manual*. Organizational Research Unit: Swinburne University of Technology.
- Palmer, B. R., Stough, C., Harmer, R., & Gignac, G. (2009). The genos emotional intelligence inventory: A measure designed specifically for workplace applications. In C. Stough, D. H. Saklofske, & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, research, and applications* (pp. 103-117). New York: Springer. doi:10.1007/978-0-387-88370-0\_
- Papadogiannis, P. K., Logan, D., & Sitarenios, G. (2009). An ability model of emotional intelligence: A rationale, description, and application of the Mayer Salovey Caruso emotional intelligence test (MSCEIT). In C. Stough, D. H. Saklofske, & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, Research, and applications* (pp. 9-40). New York: Springer. doi:10.1007/978-0-387-88370-0\_3
- Parker, J. D. A., Saklofske, D. H., Wood, L. M., & Collin, T. (2009). The role of emotional intelligence in education. In C. Stough, D. H. Saklofske, & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, Research, and applications* (pp. 239-255). New York: Springer. doi:10.1007/978-0-387-88370-0\_1
- Parker, J. D. A., Hogan, M.J., Eastabrook, J.M., Oke, A., & Wood, L.M (2006). Emotional intelligence and student retention: Predicting the successful transition from high school to university. *Personality and Individual Differences*, 41, 1329-1336.
- Pau, A. K., & Croucher, R. (2003). Emotional Intelligence and perceived stress in dental undergraduates. *Journal of Dental Education*, 67, 1023-1028.
- Penrose, A., Perry, C., & Ball, I. (2007). Emotional intelligence and teacher self-efficacy: The contribution of teacher status and length of experience. *Issues in Educational Research*, 17, 107-126.
- Perry, C., & Ball, I. (2005). Emotional intelligence and teaching: Further validation evidence. *Issues in Educational Research*, 15, 175-192.



- Perry, C., Ball, I., & Stacey, E. (2004). Emotional intelligence and teaching situations: Development of a new measure. *Issues in Educational Research*, 14, 29-43.
- Pérez-Escoda, N., Guiu, G. F., Soldevila, A., & Fondevila, A. (2013). Evaluation of an emotional education program for primary teachers. *Educacion XX1*, 16(1), 233-254.
- Petrides, K. V. (2009a). Psychometric Properties of the Trait Emotional Intelligence Questionnaire (TEIQue). In C. Stough, D. H. Saklofske, & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, Research, and applications* (pp. 85-101). New York: Springer. doi:10.1007/978-0-387-88370-0\_5
- Petrides, K. V. (2009b). *Technical manual for the Trait Emotional Intelligence Questionnaires (TEIQue)*. London: London Psychometric Laboratory.
- Petrides, K. V. & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality*, 15, 425-448. doi:10.1002/per.416
- Petrides, K. V., Perez-Gonzalez, J. C., & Furnham, A. (2007). On the criterion and incremental validity of trait emotional intelligence. *Cognition and Emotion*, 21, 26-55. doi:10.1080/02699930601038912
- Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology*, 98, 273-289. doi:10.1348/000712606X120618
- Pillay, H., Goddard, R., & Wilss, L. (2005). Well-being, burnout and competence: Implications for teachers. *Australian Journal of Teacher Education*, 30, 22-33.
- Pintrich, P.R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology*, 95, 667-686. doi:10.1037/0022-0663.95.4.667
- Prifitera, A., Saklofske, D. H., & Weiss, L. G. (Eds.). *WISC-IV clinical assessment and intervention (2nd ed.)*. New York, NY: Elsevier, 2008.
- Ransford, C.R., Breenberg, M. T., Domitrovich, C. E., Small, M., & Jakobson, L. (2009). The role of teachers' psychological experiences and perceptions of curriculum supports on the implementation of a social and emotional learning, *School Psychology Review*, 38, 510-532.
- Rivers, S. E., Brackett, M. A., Salovey, P., & Mayer, J. D. (2007). Measuring emotional

- intelligence as a set of mental abilities. In G. Matthews, M. Zeidner, & R. Roberts (Eds.), *Emotional intelligence: Knowns and unknowns* (pp. 230-257). Oxford: Oxford University Press.
- Roberts, R. D., Zeidner, M., & Matthews, G. (2007). Emotional intelligence: Knowns and unknowns. In G. Matthews, M. Zeidner, & R. Roberts (Eds.), *Emotional intelligence: Knowns and unknowns* (pp. 419-474). Oxford: Oxford University Press.
- Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *Journal of Educational Research, 101*, 50-60.
- Rossen, E., Kranzler, J. H., & Algina, J. (2008). Confirmatory factor analysis of the Mayer–Salovey–Caruso emotional intelligence test V2.0 (MSCEIT). *Personality and Individual Differences, 44*, 1258–1269.
- Salovey, P., & Grewal, D. (2005). The science of emotional intelligence. *Current Directions in Psychological Science, 14*, 281-285. doi: 10.1111/j.0963-7214.2005.00381.x
- Salovey, P. & Mayer, J. (1990). Emotional Intelligence. *Imagination, Cognition, and Personality, 9*, 185-211. doi:10.2190/DUGG-P24E-52WK-6CDG
- Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (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: APA.
- Saklofske, D. H., Austin, E. J., Mastoras, S. M., Beaton, L., Osborne, S. E. (2012). Relationships of personality, affect, emotional intelligence and coping with student stress and academic success: Different patterns of association for stress and success. *Learning and Individual Differences, 22*, 251–257.
- Sharif, F., Rezaie, S., Keshavarzi, S., Mansoori, P., & Ghadakpoor, S. (2013). Teaching emotional intelligence to intensive care unit nurses and their general health: a randomized clinical trial. *Int J Occup Environ Med, 4*(3), 141-148.
- Schutte, N. S., Malouff, J. M., Bhullar, N. (2009). The assessing emotions scale. In C. Stough, D. H. Saklofske, & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, Research, and applications* (pp. 119-134). New York:

- Springer. doi:10.1007/978-0-387-88370-0\_7
- 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.  
doi:10.1016/S0191-8869(98)00001-4
- Schyns, B. & Collani, G.(2002). A new occupational self-efficacy scale and its relation to personality constructs and organizational variables. *European Journal of work and Organizational Psychology, 11*, 219–241.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*, 4-14.
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*, 1-22.
- Shulman, L. S. (2000). Teacher development: Roles of domain expertise and pedagogical knowledge. *Journal of Applied Developmental Psychology, 27*, 129-135.
- Slaski, M. & Cartwright, S. (2002). Health performance and emotional intelligence: An exploratory study of retail managers. *Stress and Health, 18*, 63-68.  
doi:10.1002/smi.926
- Slaski, M., & Cartwright, S. (2003). Emotional intelligence training and its implications for stress, health and performance. *Stress and Health, 19*(4), 233-239.
- Sternberg, R.J., & Grigorenko, E.L. (1997). *Intelligence, heredity, and environment*. New York: Cambridge University Press
- Sternberg, R. J. (1988). *The triarchic mind: A new theory of human intelligence*. New York: Viking.
- Stough, C. Saklofske, D. H., & Parker, J. D. A. (2009). A brief analysis of 20 years of emotional intelligence: An introduction to assessing emotional intelligence: Theory, research, and applications. In C. Stough, D. H. Saklofske, & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, Research, and applications* (pp. 3-8). New York: Springer. doi:10.1007/978-0-387-88370-0\_1
- Sutton, R. E. (2004). Emotion regulation goals and strategies. *Social Psychology of Education, 7*, 379-398.
- Tatton, J. (2005). *Emotional intelligence or emotional negligence?* Develop Dimensions

- International: White paper.
- Thorndike, E. L. (1920). Intelligence and its uses. *Harper's Magazine*, 140, 227-235.
- Vesely, A. K. (2011). Differential Effects of Perfectionism and Anxiety on Trait and Ability Emotional Intelligence (Master's Thesis). Available from DSpace at University of Calgary.
- Vesely, A. K., Saklofske, D. H., & Nordstokke, D. W. (2014). EI training and pre-service teacher wellbeing. *Personality and Individual Differences*, 65(0), 81-85. doi: <http://dx.doi.org/10.1016/j.paid.2014.01.052>
- Vesely, A. K., Saklofske, D. H., & Leschied, A. D. W. (2013) Teachers - The vital resource: The contribution of emotional intelligence to teacher efficacy and wellbeing. *Canadian Journal of School Psychology*, 28(1), 71-89. doi: 10.1177/0829573512468855
- Yalcin, B. M., Karahan, T. F., Ozcelik, M., & Igde, F. A. (2008). The effects of an emotional intelligence program on the quality of life and well-being of patients with type 2 diabetes mellitus. *Diabetes Educator*, 34(6), 1013-1024.
- Youssef, C. M., & Luthans, F. (2007). Positive organizational behavior in the workplace: The impact of hope, optimism, and resilience. *Journal of Management*, 33, 774-800.
- Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35, 161-175.
- Zeidner, M., Matthews, G., & Roberts, R. D. (in press). The emotional intelligence, health, and well-being nexus: What have we learned and what have we missed? *Applied Psychology: Health and Well-Being*, doi: 10.1111/j.1758-0854.2011.01062.x
- Zeidner, M., Matthews, G., & Roberts, R. D. (2001). Slow down you move too fast: Emotional intelligence remains an "elusive" intelligence. *Emotions*, 1, 265-275. doi:10.1037//1528-3542.1.3.265
- Zeidner, M., Matthews, G., & Roberts, R. D. (2009). Grace under pressure? Emotional intelligence, stress, and coping. In M. Zeidner, G. Matthews, & R. D. Roberts (Eds.), *What we know about emotional intelligence* (pp.203-222). Cambridge: The MIT Press.
- Zeidner, M. & Saklofske, D. H., (1996). Adaptive and Maladaptive coping. In Zeidner, M. & N.S. Endler (Eds.). *Handbook of Coping: Theory, Research, Applications* (pp. 505-531). New York: Wiley.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2012). The emotional intelligence, health, and

well-being nexus: What have we learned and what have we missed? *Applied Psychology: Health and Well-being*, 4, 1-30.

Zeidner, M., Roberts, R. D., Matthews, G (2008). The science of emotional intelligence: Current consensus and controversies. *European Psychologist*, 13, 64-78.

Zeidner, M., Matthews, G., Roberts, R. D., & MacCann, C. (2003). Development of emotional intelligence: Toward a multi-level investment model. *Human Development*, 46, 69-96.

Zins, J. E., Payton, J., Weissberg, R. P., & Unte O'Brien, M. (2007). Social and emotional learning for successful school performance. In G. Matthews, M. Zeidner, & R. D. Roberts (Eds.), *Emotional intelligence: Knowns and unknowns* (pp. 376–395). New York: Oxford University Press.

Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (2004). *Building academic success on social and emotional learning*. New York: Teachers College Press.

Zuercher, D. K., Kessler, C., & Yoshioka, J. (2011). The CAST initiative in Guam: A model of effective teachers teaching teachers. *US-China Education Review*, 8, 1-13.

## Chapter 2

### **Teachers – The Vital Resource: the Contribution of Emotional Intelligence to Teacher Efficacy and Well-Being<sup>2</sup>**

#### **Abstract**

The study of emotional intelligence (EI) shows promise in predicting educational competencies and positive life outcomes. Considering the many demands placed on teachers and the link to occupational stress, burnout, and decreased job satisfaction, EI may be foundational to developing competencies that lead to improved psychological health and teaching success and, in turn, positive student outcomes. It is argued that core factors describing teacher efficacy can be subsumed under the competencies comprising EI. This overlap in skill sets suggests that EI training may also increase teachers' efficacy in the classroom and decrease their stress and job dissatisfaction.

#### **Résumé**

L'étude d'intelligence émotionnelle montre de la promesse dans la prédiction des compétences éducationnelles et les résultats positifs dans la vie quotidienne. Compte tenu des demandes faites aux enseignants et le rapport avec le stress du travail, l'épuisement, et la diminution de la satisfaction dans le travail, il se peut que l'intelligence émotionnelle est intégrale dans le développement des compétences qui mène les réussites dans le domaine de l'enseignement, qui améliore la santé mentale et, par conséquent, les résultats scolaires positifs. On peut soutenir que les facteurs décrivant l'efficacité des enseignants peut être englober dans les compétences de l'intelligence émotionnelle. Le chevauchement des compétences suggère que la formation d'intelligence émotionnelle peut augmenter l'efficacité des enseignants dans la salle de classe, et réduire leur stress, ainsi que leur mécontentement dans leur travail.

---

<sup>2</sup> The following article has been previously published. Permission to include article in dissertation was granted by SAGE publications – permission email included in Appendix D. Citation:

Vesely, A. K., Saklofske, D. H., & Leschied, A. D. W. (2013) Teachers - The vital resource: The contribution of emotional intelligence to teacher efficacy and wellbeing. *Canadian Journal of School Psychology*, 28(1), 71-89. doi: 10.1177/0829573512468855

**Keywords**

emotional intelligence, teacher efficacy, stress, well-being

---

Teaching is recognized to be one of the most important and also demanding occupations in contemporary society. Without dispute, teachers play a pivotal role, if not *the* pivotal role, in student learning and achievement (e.g., Corbett & Wilson, 2002; McIntyre & Battle, 1998; Murphy, Delli, & Edwards, 2004; Thomas, 1998). These professionals not only transmit knowledge but also ensure that students acquire learning skills in addition to socially and culturally relevant behaviours. However, teaching is also a job of high “emotional labour” (Brennan, 2006; Hargreaves, 2001), and considerable evidence documents the significant levels of occupational stress experienced by teachers (e.g., Chang, 2009; Hakanen, Bakker, & Schaufeli, 2006; Kokkinos, 2007; Maslach, 1999; Pillay, Goddard, & Wilss, 2005), which can result in job dissatisfaction and mental health difficulties (Chan, 2006). Thus, the psychological health of teachers is imperative for the “success” of students, the education system, and the larger society. Based on the assumption that subject matter knowledge is present in teacher experts, this article focuses on other critically important aspects of the effective teacher.

A considerable research literature supports the significant influence of effective teachers on desirable classroom and student outcomes (Jennings & Greenberg, 2009; Murphy et al., 2004; Yoon, 2002). Underlying these findings are two main areas, key to describing the expert teacher: (a) the “professional” skills and characteristics needed for optimal effectiveness in the classroom and with students generally and (b) “personal” skills and characteristics that buffer the adverse components and situations of teaching and contribute to the building of resilience, psychological well-being, and teacher efficacy.

Studies of emotions and stress have identified the underpinnings and suggested methods for supporting psychological and physical health and well-being. Emotional intelligence (EI), broadly defined as encompassing an array of emotional competencies that facilitate the identification, processing, and regulation of emotion (Austin, Saklofske, & Egan, 2005; Petrides & Furnham, 2001; Salovey & Mayer, 1990), holds promise as a means through which potential negative teacher outcomes may be mitigated while supporting personal and professional well-being. Focusing on the relationships between higher EI and both enhanced coping skills and

decreased occupational stress levels (Stough, Saklofske, & Parker, 2009) provides an avenue for improving successful stress management and building resilience in teachers.

This review highlights the relevance of EI in the context of human services. Specifically, it addresses how EI aids in the development of emotional cognition and understanding that can positively affect teacher psychological health and, in turn, their behaviours that are linked to student learning outcomes. This article describes the research surrounding teacher efficacy in relation to the construct of EI and illustrates how (a) higher levels of EI can mediate stress escalation and improve its management; (b) it helps to facilitate effective teaching, builds resilience, and contributes to a large portion of the positive factors comprising teacher efficacy; and (c) it can be developed through specific EI-program training. It is suggested that the foundational characteristics and abilities that support positive teacher efficacy are in large part grounded in EI and that EI-enhancing programs may serve to improve positive teaching characteristics and prevent/decrease the use of less effective qualities or strategies by addressing potential challenges to teachers' psychological health and well-being (e.g., Parker, Saklofske, Wood, & Collin, 2009). Identifying the direct or even indirect impact that improving EI may have on teacher efficacy could be key to increasing the positive effect teachers have on their students' learning and well-being. Understanding EI's impact further provides an avenue for continued research in other areas of professional development by extending models that identify the "good teacher" and good teaching practices.

### **Strengthening Teacher Efficacy: What Is It and Why Is Support so Imperative?**

To encourage and support the psychological health and well-being of teachers, it is necessary to recognize the myriad stressors encountered by these professionals, the extent to which support of "personal" resources are necessary, and the characteristics that describe the highly efficacious teacher. In turn, the relationship between EI and teacher efficacy may serve as a foundation for further ensuring the well-being of teachers and supporting their positive impact within the school environment.

**A Teacher's Need for Support: Dealing With Stress, Job Dissatisfaction, and Burnout.** Identifying the factors that underlie teacher efficacy is crucial in determining teachers' personal and emotional well-being; these characteristics are often linked to their negative counterparts, namely, stress, burnout, and job dissatisfaction (Brackett, Palomera, Mojsa-Kaja,



Reyes, & Salovey, 2010; Jennings & Greenberg, 2009). Individuals within the teaching profession continue to be vulnerable to high levels of occupational stress (e.g., Chang, 2009; Hakanen et al., 2006; Kokkinos, 2007; Maslach, 1999; Pillay et al., 2005), which creates increased emotional demands leading to exhaustion, decreased job satisfaction, mental health problems, and ultimately leaving the profession. In turn, teachers who are compromised in their personal adjustment can negatively affect classroom learning, individual student well-being, and the overall educational system (Chan, 2006). Given the wide range of intellectual and emotional resources required for teaching, the nature of the profession is such that when the demands of managing student behaviours and learning become overwhelming, lower job satisfaction and ultimately job burnout result (Chang & Davis, 2009; Lens & de Jesus, 1999). The way in which teachers are able to draw on personal resources and use external supports may aid in their ability to cope with such demands.

Exhaustion and burnout can result from teachers' expectations and efforts to manage their own coping and the distressing events in the lives of their students in addition to their academic responsibilities (Hargreaves, 1998). Just as both internal and external factors contribute to teacher efficacy, both individual (e.g., personality, self-concept, resilience) and organizational factors, including work demands, class size, and administrative support, play a role in burnout. Chang (2009) suggests that it is a teacher's repeated experience with unpleasant emotions that leads to burnout through "transactional" factors such as their attributions or judgments of student behaviours, self-concept/efficacy, or perception of support. Specifically, these emotions emerge through teachers' judgment patterns of student behaviours and other teaching duties, which can contribute to negative outcomes. Once such negative emotions are present, a teacher is compromised and less able to uphold his or her ideal level of efficacy.

**What Comprises Teacher Efficacy?** Teacher efficacy was initially viewed as a general personality trait allowing for effective interactions (Barfield & Burlingame, 1974), and later involved the teacher's perception of his or her impact on student learning under various conditions (e.g., Ashton, 1985; Guskey & Passaro, 1994; McLaughlin & Marsh, 1978). Teacher efficacy has focused on the "beliefs" of the teacher that includes the notion of self-efficacy. Early descriptions of self-efficacy described in both Rotter's (1966) social learning theory and Bandura's (1986) social cognitive theory examined locus of control. Tschannen-Moran and Woolfolk Hoy's (2001) Ohio State Teacher Efficacy Scale (i.e., efficacy for instructional

strategies, efficacy for classroom management, and efficacy for student engagement) revealed the importance of assessing a broader range of teaching tasks when assessing efficacy. Though self-efficacy could influence objective efficacy (Allinder, 1994; Ashton & Webb, 1986), it is insufficient as a construct description lacking in an acknowledgment of factors such as the demands placed on teachers and how those are met.

**Helpful and Harmful Factors Affecting Teacher Competencies.** Attempts to define teacher efficacy offer a closer look at those factors that differentiate effective teachers from those that are less effective. This, in turn, also identifies avenues for the support of factors that build resilience beyond the earlier work describing broad types of teacher expertise (e.g., content knowledge, pedagogical knowledge, and pedagogical content knowledge; see Shulman 1986).

Influences on teacher efficacy can be divided into those mainly within the teacher's control (internal), which include affect, knowledge, or work ethic, and those that are beyond a teacher's immediate control, such as the child's home environment, the school's neighbourhood, or board policies. Important "internal" factors studied in relation to teacher efficacy include, but are not limited to, the aforementioned beliefs of self-efficacy (e.g., Henson, 2002; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). This subsumes personal motivation (e.g., Pintrich, 2003; Pintrich & Schunk, 1996), or the teacher's capacity to instill in students the drive to work towards specific goals. Such self-efficacy beliefs contribute to a teacher's own motivation to work on self-improvement and classroom performance. Furthermore, classroom management skills may contribute to teacher efficacy directly or indirectly (e.g., Emmer & Stough, 2001). Coping skills and stress management are also relevant (e.g., Austin, Shah, & Muncer, 2005; Chang, 2009; Jennings & Greenberg, 2009) and reflect the skills and tools through which a teacher is able to manage demands, deal with stressful events, and maximize his or her personal strengths including personality and temperament factors (e.g., Henson & Chambers, 2003; Patrick, 2011; Schyns & Collani, 2002). Each of these variables can affect teaching styles, student-teacher relationships, and cognitive, behavioural, and emotional self-regulation.

Factors that undoubtedly affect teacher efficacy, but are considered more external and much less under the control of the individual, include teacher support through school administration, availability of resources, and opportunities for collaboration (e.g., Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009). These will also include the teaching

environment (e.g., Chang, 2009) that extends from the state and aesthetics of the classroom and its resources to classroom dynamics, and diversity of the student population (e.g., Hollins & Guzman, 2005; Poplin, et al., 2011). This also includes the student's emotional or financial difficulties outside of the classroom, as well as cultural differences.

It is important to acknowledge the interaction between such internal and external factors, as efficacy is often a measure of the teacher's ability to use internal skills to mediate the external circumstances through relevant contextual variables in support of a positive learning environment. Furthermore, such interaction involves an appreciation that the role of teacher efficacy can be limited by social contexts and certain changing contexts may alter the definition of teacher efficacy (Labone, 2004). The identification of factors that comprise and impact teacher efficacy establish its dependence on the mental health and well-being of the individual and provides an avenue for the role of EI.

### **Emotional Intelligence: How Is It Related to Teacher Efficacy?**

**EI Can Help Mitigate the Effects of Stress.** The high-level demands placed on classroom teachers pose the potential to compromise personal coping resources and increase stress and risk for burnout (Chan, 2006; Chang & Davis, 2009). EI has been shown to significantly influence a tolerance for stress (Lopes, Cote, & Salovey, 2006) such that higher EI is linked to lower occupational stress as well as improved psychological and physical health (e.g., Chan, 2006; Slaski & Cartwright, 2002; Stough et al., 2009). More specifically, EI and coping appear to combine to mediate the effects of personality on stress (Austin, Saklofske, & Mastoras, 2010; Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012), highlighting the need for developing emotional abilities in improving personal coping strategies (Downey, Johnston, Hansen, Birney, & Stough, 2010). This notion of EI as a positive coping resource for teachers has also been emphasized by Chan (2008), showing that EI (intrapersonal EI to a greater extent than interpersonal EI; see Bar-On, 1997, for the distinction) is a significant predictor of active coping. Furthermore, the impact of teacher self-efficacy on adaptive coping strategies was not independent of the effects of EI. This interaction effect also aligns with Schwarzer and Hallum's (2008) finding that job stress may act as a mediator between self-efficacy and burnout (emotional exhaustion). Teachers with high self-efficacy (and high EI) appraise and interpret teaching-

related job demands as more of a challenge rather than a threat, which can certainly aid in the management of negative affective experiences.

The negative emotional components of occupational stress and burnout, which are reflected in emotional stress and poor personal emotional self-regulation (two central components of low EI), are considered a primary reason for teacher dissatisfaction and ultimately the decision to leave the profession (Darling-Hammond, 2001; Montgomery & Rupp, 2005). Again, this supports the critical role of EI as an important factor in burnout because negative emotions and stressful experiences are dependent on an individual's perception and appraisal of his or her environment (i.e., a stressor is not a stressor unless it is perceived as such). Individual differences in appraisals of one's surroundings are further reflected in coping styles (Chan, 2008; Endler & Parker, 1994) and self-regulation (Boekaerts, Pintrich, & Zeidner, 2000), which also have a significant impact on the ability to manage stress (Zeidner & Saklofske, 1996). EI embodies coping and regulation abilities and has been linked to lower rates of teacher burnout (e.g., Chan, 2006) and higher levels of well-being (e.g., Brackett, Rivers, & Salovey, 2011; Chang, 2009). Teachers with high EI have shown to respond more effectively to negatively charged situations than those with low levels of EI (Perry & Ball, 2007). The research evidence suggests that EI, reflected in personal coping and self-regulation, is critical in contributing to the prevention of occupational stress and burnout while improving a teacher's management of the classroom.

**EI Is Positively Associated With Teacher Efficacy.** The link between EI and the components of efficacy in various contexts has been shown in several recent studies. Gardner and Stough (2002) found that individuals in positions of workplace management with higher levels of EI reported a higher likelihood of desiring success, working harder, leading an effective team, and higher satisfaction in working with peers. Furthermore, workplace performance-enhancing skills, such as successful interactions with colleagues, positive strategies to manage conflict and stress, and overall job performance, are influenced by EI (Ashkanasey & Daus, 2005; Lopes et al., 2006). The relationship between EI and the ability to cope adaptively in a variety of circumstances (including classroom teaching) appears to be well established and both show a strong positive relationship with the management of adverse situations and general stress (e.g., Brackett & Katulak, 2007; Humphrey, Curran, Morris, Farrell, & Woods, 2007; Zeidner, Matthews, & Roberts, 2009).

Wong, Wong, and Peng (2010) argued that these results could also be valid in the school setting and are congruent with their findings that EI in teachers and middle-level school leaders were positively related to teachers' job satisfaction level. Teachers with higher EI reported a greater attunement to the emotional needs of others, an ability to interact with students in ways that extend individualized learning opportunities, more effective management of their own emotional responses (Perry & Ball, 2005), and overall greater effectiveness (Penrose, Perry, & Ball, 2007). A significant positive relationship between EI and efficacy beliefs was found in Turkish EFL pre-service teachers, indicating those with higher EI were more likely to employ a wide array of productive teaching strategies (Koçoğlu, 2011).

Parker et al. (2009) emphasize the role of EI in education programs and their effect on interpersonal and intrapersonal outcomes in the workplace, such as those encountered by health care providers in medical settings (Louie, Coverdale, & Roberts, 2006). These competencies, including interpersonal and communicative abilities and empathy, are important dimensions within most EI models and can be extrapolated to their usefulness within the classroom. The links between these noted characteristics and EI in addition to the emphasis placed on their importance for teacher efficacy support the words of Perry and Ball (2005) that "good teaching does reflect the exercise of emotional intelligence" (p. 11). These findings reinforce the significance of EI factors in interactive professional roles.

**EI Encompasses Emotion Factors Associated With Effective Teaching.** The description of an effective teacher by both students and professionals has been dominated by emotionally laden characteristics such as caring, understanding, warm, friendly, patient, as well as abilities to relate to children, to motivate students, and to maintain discipline (Weinstein, 1989). Research has also identified that students value teacher characteristics such as having control over the classroom, involvement with students and their circumstances, respect and fairness in the classroom, and showing kindness and helpfulness (Corbett & Wilson, 2002; McIntyre & Battle, 1998; Thomas, 1998). It is suggested that EI encompasses the underlying, foundational characteristics and abilities that support positive teacher efficacy. Various studies have shown that teachers with higher motivation are better at engaging students in the classroom (e.g., Pintrich, 2003) and teachers with better coping skills are more effective at relating to students as well as have more adaptive classroom management skills (e.g., Austin, Shah, et al., 2005; Emmer & Stough, 2001; Libbey, 2004).

One continuing problem area within teacher efficacy research is the lack of attention to the sources of teacher efficacy and how these operate in practice (Klassen, Tze, Betts, & Gordon, 2011). The findings reported here hint that the root of these skills may be attributed, at least in part, to one cohesive construct: EI.

**EI-Related Factors Contributing to Teacher Efficacy.** Many factors that contribute to teacher efficacy and may help explain competent teacher behaviour and positive classroom outcomes overlap with EI. A short list would include emotional regulation ability (ERA), emotional labour, social-emotional competence (SEC), and components of rational-emotive behaviour theory (REBT).

Brackett et al. (2010) describe how ERA predicts lower emotional exhaustion, an ability to develop personal connections with students, and a higher number of positive emotions, including feelings of accomplishment and satisfaction in teaching. Those teachers with higher emotional regulation, in other words, who demonstrate an ability to “up-regulate” their positive emotions and “down-regulate” their negative emotions, are more productive and effective in the classroom (Sutton & Harper, 2009). Similarly, emotional labour (Hochschild, 1983), described as the suppression or expression of emotion for the purpose of meeting a goal within the workplace (e.g., maintaining a positive classroom atmosphere; Brown, 2011; Grandey, 2000), is a particular challenge in teaching (Brennan, 2006). Furthermore, SEC, consisting of self-awareness, social awareness, responsible decision making, self-management, and relationship management (Zins, Weissberg, Wang, & Walberg, 2004), is implicated in the development and maintenance of a prosocial classroom, which fosters learning and decreases the likelihood of teacher burnout (Jennings & Greenberg, 2009). Teachers with higher SEC contribute to supportive teacher–student relationships, demonstrate skillful management of student behaviours and classroom dynamics, and are positive role models for the effective implementation of social and emotional curricula (Jennings & Greenberg, 2009). REBT (Ellis, 1973) has been applied in teacher education to help reduce negative student behaviours and decrease teacher stress (Nucci, 2002) based on the notion that undesirable teaching behaviours can be reduced by identifying and altering behavioural antecedents (thoughts, beliefs, and feelings; Ellis, 1973) and by addressing both stress-inducing and stress-creating attitudes.

Primary within these four models (ERA, emotional labour, SEC, and REBT) is their

relationship to EI, which, in turn, influences teacher efficacy. Both emotional labour and ERA are means of managing emotions based on context and surrounding influences (Brown, 2011). In both cases, the involvement of emotional response management by the individual fits within subfactors of the EI construct (e.g., within “managing emotions” of the ability model; Mayer, Salovey, & Caruso, 2002; Salovey & Mayer, 1990). Though the relationship of SEC to EI has been debated, it can be argued that EI subsumes the thoughts and actions that result from emotional competency described within ERA (see Zins, Payton, Weissberg, & Unte O’Brien, 2007, for a review of construct differences). Moreover, EI processes and actions contribute similarly to positive management in the classroom and are shown to be useful in the explanation of individual differences in teacher SEC (Jennings & Greenberg, 2009). Similar to ERA and emotional labour, SEC’s components can also be mapped onto the different domains within EI subfactors of both EI ability and trait models (e.g., Mayer et al., 2002; Palmer & Stough, 2001; Petrides & Furnham, 2001; Schutte et al., 1998). Similarly, when examining REBT in the context of EI, the focus on reducing the individual’s negative emotions and eliminating negative beliefs in emotionally laden situations can be subsumed under the skills involved in persons who reflect high EI, as described above by Perry and Ball (2007). More specifically, both the ability and trait conceptualizations of EI involve manipulation, control, and management of both pleasant and unpleasant (e.g., stressful) emotions in a myriad of contexts.

### **How Can EI Facilitate the Enhancement of Teacher Efficacy?**

To this point, EI has been shown to mitigate the effects of teacher stress and promote personal well-being, hence the viewpoint that EI is fundamental to the modification and enhancement of these teacher efficacy-relevant variables. This is revealed in differences between individuals with varying levels of emotional management, stress tolerance, and classroom outcomes (Brackett et al., 2010, 2011; Jennings & Greenberg, 2009).

**Acquiring Teaching Skills: Programs Aimed at Improving Teacher Efficacy.** There is debate as to what makes the “best” teacher, whether good teachers are “made or born,” and how much intelligence and various personality factors contribute to effective and psychologically healthy teachers. However, there is at least some support that both core competencies and “qualities” that are commonly identified in effective teachers are at least partially acquired.

Attempts to improve positive teaching characteristics have been made through an array of effective professional development workshops and programs (e.g., Berry, Daughtrey, & Wieder, 2010a, 2010b; Darling-Hammond & Richardson, 2009). These range from strengthening content knowledge in various subject areas, enhancing pedagogical skills for instructional support, or improving classroom management skills (e.g., Emmer & Stough, 2001; Zuercher, Kessler, & Yoshioka, 2011), to skills training in areas such as personal coping (e.g., Austin, Shah, et al., 2005; Howard & Johnson, 2004). Most of these programs have some component aimed at increasing teachers' personal well-being and tend to focus on self-regulation. Interestingly, many of these components mirror the skills present in individuals with high EI or are taught through EI training. Some examples include Rational Emotive Education (which corresponds to REBT; Maag, 2008; Nucci, 2002), which is used in educational settings to aid teachers in reducing stress, regulating their emotions and behaviour when dealing with disruptive students, and improving their overall effectiveness; The Caring School Community (Solomon, Watson, Delucchi, Schaps, & Battistich, 1988); and Promoting Alternative Thinking Strategies (Kusche & Greenberg, 1994), all of which target the development of a positive classroom climate and increase of teachers' responsiveness to the psychosocial and emotional needs of students. Additional programs focus on developing pedagogical skills related to specific content knowledge (e.g., mathematics instruction), which also emphasize the importance of increasing teachers' confidence in managing students and other social-emotional factors such as student motivation and engagement (Ross & Bruce, 2007). Evidence also exists that the teacher's own emotional efficacy has an impact on successful program implementation (Jennings & Greenberg, 2009).

**EI Training for the Enhancement of Teacher Efficacy.** The extent to which EI can be learned or taught (e.g., Humphrey et al., 2007) is still open for debate. However, as discussed above, certain emotional competencies can be learned or enhanced through training. One means of increasing EI is to implement developmental EI training. These programs have been successful in improving EI skills in various populations including a sample of U.K. managers (Slaski & Cartwright, 2003) and university students at risk for dropout (Parker, Hogan, Eastabrook, Oke, & Wood, 2006). These studies demonstrate that increasing EI can promote resilience in the face of increased stress. Gardner (2006) showed EI training to be effective in



increasing self-reported EI, organizational commitment, and job satisfaction and in reducing occupational stress.

General application programs of EI have also been developed. Examples include Mindfulness-Based EI training (Ciarrochi, Blackledge, Bilich, & Bayliss, 2007), a specific theory-based practical approach to improving EI skills (Kornacki & Caruso, 2007), and a variation of the Leadership Executive Assessment and Development program based on Intentional Change Theory and Kolb's Experiential Learning Theory, which includes an EI development course (Boyatzis, 2007; see also Cherniss & Adler, 2000). The theories, techniques, and effectiveness of each of these three programs in addition to the program discussed below (Brackett & Katulak, 2007) have been examined in the research literature (see Ciarrochi & Mayer, 2007).

Other programs specifically related to the classroom and educational context have also been developed. The Collaboration for Academic, Social, and Emotional Learning provides programs for the training of social and emotional skills in teachers and students, including the program, *The Emotionally Intelligent Teacher*. This is a workshop based on the Mayer et al. (2002) model, presented in four sections that includes perceiving, using, understanding, and managing emotions, and provides teachers with strategies to increase EI skills in personal and professional relationships. It involves activities designed to increase school effectiveness through the development of EI skills aimed at improving interactions within the school community (Brackett & Katulak, 2007). RULER (recognizing, understanding, labelling, expressing, and regulating emotions) is a school-based EI intervention program, involving students, teachers, family members, and school leaders aimed at building skills to improve decision making, relationship building, and more positive well-being in the school environment (Brackett et al., 2011). Though this program is designed for a wider audience and not limited to teachers, classrooms engaged in this program showed more positive interactions, greater enthusiasm about learning, less bullying instances with students, and less anger and frustration expressed by students (Brackett et al., 2011).

More recently, a psycho-educational program developed by Hansen, Gardner, and Stough (2007) in Australia teaches the management of occupational stress through the development of EI. In its application for teachers, this program has been modified by Hansen (2010; "Emotional

Intelligence in the Classroom”) and is based on a similar theoretical model that focuses on the development of skills related to emotional self-awareness and expression, and emotions attached to awareness of others, reasoning, self-management, management of others, and self-control. Empirical evaluation of the original Australian program was successful in increasing the participants’ EI, reducing their occupational stress, and improving their psychological and physical well-being (Gardner, 2005). A pilot study of this program with Canadian student teachers suggested that EI scores did increase at the conclusion of the program, one month following completion (Poole & Saklofske, 2009). Considering the links between higher levels of EI, lower occupational stress, and better psychological and physical well-being (Chan, 2006; Gardner, 2005; Nikolaou, 2002; Pau & Croucher, 2003; Slaski & Cartwright, 2002, 2003), there is considerable potential in exploring options for increasing EI in teachers.

### **Conclusion and Future Research Directions**

The increasing demands on teachers’ intellectual and emotional resources are linked to increased occupational stress, burnout, and decreased job satisfaction (e.g., Chang, 2009; Chang & Davis, 2009; Hakanen et al., 2006; Lens & de Jesus, 1999). The effects of both acute and chronic stress affect not only the physical and psychological health of teachers but also their “sense” of efficacy both personally and professionally, which, in turn, is a powerful predictor of student learning and achievement (Corbett & Wilson, 2002; Murphy et al., 2004; Thomas, 1998). A hallmark of effective teaching is reflected in the ability to manage emotions and to implement effective coping strategies during stressful times. Though professional development programs most often focus on core teaching competencies, the myriad of factors that comprise teacher efficacy have largely been attributed to emotionally laden characteristics (e.g., Corbett & Wilson, 2002; McIntyre & Battle, 1998). EI would appear to provide the foundation for enhancing teacher efficacy.

Most encouraging are the findings that EI can be increased through the use of evidence-based programs. Research has shown that increasing EI leads to more effective stress management (e.g., Gardner, 2006), but this may also increase job satisfaction and overall well-being (Austin, Saklofske, et al., 2005; Chan, 2006; Stough et al., 2009). Furthermore, EI has been both directly and indirectly linked to specific teaching factors such as leadership, conflict management, motivation, and positive communication strategies (e.g., Gardner & Stough, 2002;

Perry & Ball, 2005). Programs that increase EI should therefore provide an avenue through which to augment and enhance teacher efficacy and associated indicators that describe the “effective” teacher. Following from earlier studies of EI programs for teachers (e.g., “Emotional Intelligence in the Classroom”; Hansen, 2010), a study is being initiated by the authors with pre-service teachers during their university training program and first years of teaching.

Brackett et al. (2011) suggest that an emotionally positive learning environment is the foundation for both academic engagement and achievement. This fact further emphasizes that effective teaching demands skills beyond the conveyance of academic knowledge and requires emotion-related competencies. EI would seem to have the potential to improve psychological well-being, decrease stress, and increase teacher efficacy, thus ultimately influencing student and classroom outcomes.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### **Funding**

The authors received no financial support for the research, authorship, and/or publication of this article.

### References

- Allinder, R. M. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Teacher Education and Special Education, 17*, 86-95.
- Ashkanasey, N. M., & Daus, C. S. (2005). Rumors of the death of emotional intelligence in organizational behavior are vastly exaggerated. *Journal of Organizational Behavior, 26*, 441-452.
- Ashton, P. T. (1985). Motivation and teacher's sense of efficacy. In C. Ames & R. Ames (Eds.), *Research on motivation in education: Vol. 2. The classroom milieu* (pp. 141-174). Orlando, FL: Academic Press.
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York, NY: Longman.
- Austin, E. J., Saklofske, D. H., & Egan, V. (2005). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences, 38*, 547-558. doi:10.1016/j.paid.2004.05.009
- Austin, E. J., Saklofske, D. H., & Mastoras, S. M. (2010). Emotional intelligence, coping and exam-related stress in Canadian undergraduate students. *Australian Journal of Psychology, 62*, 42-50. doi:10.1080/00049530903312899
- Austin, V., Shah, S., & Muncer, S. (2005). Teacher stress and coping strategies used to reduce stress. *Occupational Therapy International, 12*, 63-80.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Barfield, V., & Burlingame, M. (1974). The pupil control ideology of teachers in selected schools. *Journal of Experimental Education, 42*, 6-11.
- Bar-On, R. (1997). *The Emotional Quotient Inventory (EQ-i): A test of emotional intelligence*. Toronto, Ontario, Canada: Multi-Health Systems.
- Berry, B., Daughtrey, A., & Wieder, A. (2010a). *Preparing to lead an effective classroom: The role of teacher training and professional development programs*. Retrieved from [http://teachersnetwork.org/effectiveteachers/images/CTQPolicyBriefOn\\_TCHR\\_TRAINING\\_ANDPROFDEV\\_\\_021810.pdf](http://teachersnetwork.org/effectiveteachers/images/CTQPolicyBriefOn_TCHR_TRAINING_ANDPROFDEV__021810.pdf)

- Berry, B., Daughtrey, A., & Wieder, A. (2010b). *Teacher leadership: Leading the way to effective teaching and learning*. Retrieved from [http://teachersnetwork.org/effective-teachers/images/CTQPolicyBriefOn\\_TEACHER\\_LEADERSHIP\\_\\_021810.pdf](http://teachersnetwork.org/effective-teachers/images/CTQPolicyBriefOn_TEACHER_LEADERSHIP__021810.pdf)
- Boekaerts, M., Pintrich, P., & Zeidner, M. (Eds.). (2000). *Handbook of self-regulation*. San Diego, CA: Academic Press.
- Boyatzis, R. E. (2007). Developing emotional intelligence competencies. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 28-52). New York, NY: Psychology Press/Taylor & Francis.
- Brackett, M. A., & Katulak, N. A. (2007). Emotional intelligence in the classroom: Skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 28-52). New York, NY: Psychology Press/Taylor & Francis.
- Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary school teachers. *Psychology in the Schools, 47*, 406-417.
- Brackett, M. A., Rivers, S. E., & Salovey, P. (2011). Emotional intelligence: Implications for personal, social, academic, and workplace success. *Social and Personality Psychology Compass, 5*, 88-103.
- Brennan, K. (2006). The managed teacher: Emotional labour, education, and technology. *Educational Insights, 10*, 55-65.
- Brown, E. L. (2011). *Emotion matters: Exploring the emotional labour of teaching* (Doctoral dissertation). Retrieved from <http://d-scholarship.pitt.edu/7209/>
- Chan, D. W. (2006). Emotional intelligence and components of burnout among Chinese secondary school teachers in Hong Kong. *Teaching and Teacher Education, 22*, 1042-1054.
- Chan, D. W. (2008). Emotional intelligence, self-efficacy, and coping among Chinese prospective and in-service teachers in Hong Kong. *Educational Psychology, 28*, 397-408.
- Chang, M. L. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review, 2*, 193-218.
- Chang, M. L., & Davis, H. A. (2009). Understanding the role of teacher appraisals in shaping the dynamics of their relationships with students: Deconstructing teachers' judgments of

- disruptive behavior/students. In P. A. Schutz & M. Zembylas (Eds.), *Advances in teacher emotions research* (pp. 95-127). New York, NY: Springer.
- Cherniss, C., & Adler, M. (2000). *Promoting emotional intelligence in organizations: Make training in emotional intelligence effective*. Washington, DC: American Society of Training and Development.
- Ciarrochi, J., Blackledge, J., Bilich, L., & Bayliss, V. (2007). Improving emotional intelligence: A guide to mindfulness-based emotional intelligence training. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 89-124). New York, NY: Psychology Press/Taylor & Francis.
- Ciarrochi, J., & Mayer, J. D. (2007). The key ingredients of emotional intelligence interventions: Similarities and differences. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 144-156). New York, NY: Psychology Press/Taylor & Francis.
- Corbett, D., & Wilson, B. (2002). What urban students say about good teaching. *Educational Leadership, 60*, 18-22.
- Darling-Hammond, L. (2001). The challenge of staffing our schools. *Educational Leadership, 58*, 12-17.
- Darling-Hammond, L., & Richardson, N. (2009). Teacher learning: What matters? *Research Review, 66*, 46-53.
- Downey, L., Johnston, P. J., Hansen, K., Birney, J., & Stough, C. (2010). Investigating the mediating effects of emotional intelligence and coping on problem behaviours in adolescents. *Australian Journal of Psychology, 62*, 20-29.
- Ellis, A. (1973). *Humanistic psychotherapy: The rational-emotive approach*. New York, NY: Julian Press.
- Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist, 36*, 103-112.
- Endler, N. S., & Parker, J. D. A. (1994). Assessment of multidimensional coping: Task, emotion, and avoidance strategies. *Psychological Assessment, 6*, 50-60.
- Gardner, L. (2005). *Emotional intelligence and occupational stress* (Unpublished dissertation). Swinburne University of Technology, Hawthorn, Australia.

- Gardner, L. (2006). Emotional intelligence and occupational stress. In C. Stough, D. H. Saklofske & K. Hansen (Eds.), *Emotional intelligence: International symposium* (pp. 169-195). Croydon, England: Tertiary Press.
- Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Organization Development Journal*, 23, 68-78.
- Gardner, L., Stough, C., Hansen, K. (2008). *Managing Occupational Stress through the development of Emotional Intelligence*. Professional Development Program for Teachers. Swinburne, Australia.
- Gignac, G. E. (2008). *Genos Emotional Intelligence Inventory: Technical Manual*. Sydney, NSW. Genos Press.
- Grandey, A. A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5, 95-110.
- Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal*, 31, 627-643.
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, 43, 495-513.
- Hansen, K. (2010). *Emotional intelligence in the classroom*. Melbourne, Victoria, Australia: Swinburne University.
- Hansen, K., Gardner, L., & Stough, C. (2007). Improving occupational stress through emotional intelligence development. *Organizations and People*, 14, 70-75.
- Hargreaves, A. (1998). The emotional practice of teaching. *Teaching and Teacher Education*, 14, 835-854.
- Hargreaves, A. (2001). Emotional geographies of teaching. *Teacher's College Record*, 103, 1056-1080.
- Henson, R. K. (2002). From adolescent angst to adulthood: Substantive implications and measurement dilemmas in the development of teacher efficacy research. *Educational Psychologist*, 37, 137-150.
- Henson, R. K., & Chambers, S. M. (2003). Personality type as a predictor of teacher efficacy and classroom control in emergency certification teachers. *Education*, 124, 261-268.

- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.
- Hollins, E. R., & Guzman, M. T. (2005). Research on preparing teachers for diverse populations. In M. Cochrane-Smith & K. M. Zeichner (Eds.), *Teacher education: The report of the AERA panel on research and education* (pp. 477-548). Washington, DC: American Educational Research Association.
- Howard, S., & Johnson, B. (2004). Resilient teachers: Resisting stress and burnout. *Social Psychology of Education*, 7, 399-420.
- Humphrey, N., Curran, A., Morris, E., Farrell, P., & Woods, K. (2007). Emotional intelligence and education: A critical review. *Educational Psychology*, 2, 235-254.
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79, 491-525. doi:10.3102/0034654308325693
- Klassen, R. M., Tze, V. M. C., Betts, S. M., & Gordon, K. A. (2011). Teacher efficacy research 1998-2009: Signs of progress or unfulfilled promise? *Educational Psychology Review*, 23, 21-43. doi:10.1007/s10648-010-9141-8
- Koçoğlu, Z. (2011). Emotional intelligence and teacher efficacy: A study of Turkish EFL pre-service teachers. *Teacher Development*, 15, 471-484.
- Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology*, 77, 229-243.
- Kornacki, S. A., & Caruso, D. R. (2007). A theory-based, practical approach to emotional intelligence training: Ten ways to increase emotional skills. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 53-88). New York, NY: Psychology Press/Taylor & Francis.
- Kusche, C. A., & Greenberg, M. S. (1994). *The PATHS curriculum: Promoting alternative thinking strategies*. Seattle, WA: Developmental Research and Programs.
- Labone, E. (2004). Teacher efficacy: Maturing the construct through research in alternative paradigms. *Teaching and Teacher Education*, 20, 341-359.
- Lens, W., & de Jesus, S. (1999). A psychosocial interoperation of teacher burnout. In R. van Denburgh & A. M. Huberman (Eds.), *Understanding and interpreting teacher burnout: A*



- sourcebook of international research and practice*. Cambridge, England: Cambridge University Press.
- Libbey, H. P. (2004). Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. *Journal of School Health, 74*, 274-283.
- Lopes, P. N., Cote, S., & Salovey, P. (2006). An ability model of emotional intelligence: Implications for assessment and training. In V. Druskat, F. Sala & G. Mount (Eds.), *Linking emotional intelligence and performance at work* (pp. 53-80). Mahwah, NJ: Erlbaum.
- Louie, A. K., Coverdale, J., & Roberts, L. W. (2006). Emotional intelligence and psychiatric training. *Academic Psychiatry, 30*, 1-3.
- Maag, J. W. (2008). Rational-emotive therapy to help teachers control their emotions and behaviour when dealing with disagreeable students. *Intervention in School and Clinic, 44*, 52-57. doi:10.1177/1053451208318680
- Maslach, C. (1999). Progress in understanding teacher burnout. In R. Vandenberghe & A. M. Huberman (Eds.), *Understanding and preventing teacher burnout* (pp. 211-222). Cambridge, England: Cambridge University Press.
- Mayer, J. D., Salovey, P., & Caruso, D. (2002). *Mayer-Salovey-Caruso Emotional Intelligence Test manual*. Toronto, Ontario, Canada: Multi-Health Systems.
- McIntyre, T., & Battle, J. (1998). The traits of “good teachers” as identified by African-American and white students with emotional and/or behavioral disorders. *Behavioral Disorders, 23*, 134-142.
- McLaughlin, M. W., & Marsh, D. D. (1978). Staff development and school change. *Teachers College Record, 80*, 70-94.
- Montgomery, C., & Rupp, A. A. (2005). A meta-analysis for exploring the diverse causes and effects of stress in teachers. *Canadian Journal of Education, 28*, 458-486.
- Murphy, P. K., Delli, L. A. M., & Edwards, M. N. (2004). The good teacher and good teaching: Comparing beliefs of second-grade students, preservice teachers, and inservice teachers. *Journal of Experimental Education, 72*, 69-92.
- Nikolaou, I. (2002). Emotional intelligence in the workplace: Exploring its effects on occupational stress and organizational commitment. *International Journal of Organizational Analysis, 10*, 327-342.

- Nucci, C. (2002). The rational teacher: Rational emotive behavior therapy in teacher education. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 20, 15-32.
- Palmer, B. R., & Stough, C. (2001) *The Swinburne University Emotional Intelligence Test (SUEIT) technical manual*. Melbourne, Victoria, Australia: Organizational Research Unit, Swinburne University of Technology.
- Parker, J. D. A., Hogan, M. J., Eastabrook, J. M., Oke, A., & Wood, L. M. (2006). Emotional intelligence and student retention: Predicting the successful transition from high school to university. *Personality and Individual Differences*, 41, 1329-1336.
- Parker, J. D. A., Saklofske, D. H., Wood, L. M., & Collin, T. (2009). The role of emotional intelligence in education. In C. Stough, D. H. Saklofske & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, research, and applications* (pp. 239-255). New York, NY: Springer. doi:10.1007/978-0-387-88370-0\_13
- Patrick, C. L. (2011). Student evaluations of teaching: Effects of the Big Five personality traits, grades, and the validity hypothesis. *Assessment & Evaluation in Higher Education*, 36, 239-249.
- Pau, A. K., & Croucher, R. (2003). Emotional intelligence and perceived stress in dental undergraduates. *Journal of Dental Education*, 67, 1023-1028.
- Penrose, A., Perry, C., & Ball, I. (2007). Emotional intelligence and teacher self-efficacy: The contribution of teacher status and length of experience. *Issues in Educational Research*, 17, 107-126.
- Perry, C., & Ball, I. (2005). Emotional intelligence and teaching: Further validation evidence. *Issues in Educational Research*, 15, 175-192.
- Perry, C., & Ball, I. (2007). Dealing constructively with negatively evaluated emotional situations: The key to understanding the different reactions of teachers with high and low levels of emotional intelligence. *Social Psychology of Education*, 10, 443-454. doi:10.1007/s11218-007-9025-z
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality*, 15, 425-448. doi:10.1002/per.416
- Pillay, H., Goddard, R., & Wilss, L. (2005). Well-being, burnout and competence: Implications for teachers. *Australian Journal of Teacher Education*, 30, 22-33.

- Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology, 95*, 667-686. doi:10.1037/0022-0663.95.4.667
- Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications*. Englewood Cliffs, NJ: Merrill/Prentice-Hall.
- Poole, J., & Saklofske, D. H. (2009, June). *Increasing teacher efficacy and coping: An emotionally intelligent approach*. Paper presented at the Canadian Psychological Association Conference, Montreal, Canada.
- Poplin, M., Rivera, J., Durish, D., Hoff, L., Kawell, S., Pawlak, P., & Veney, C. (2011). She's strict for a good reason: Highly effective teachers in low-performing urban schools. *Phi Delta Kappan, 92*(5), 39-43.
- Ransford, C. R., Greenberg, M. T., Domitrovich, C. E., Small, M., & Jaccobson, L. (2009). The role of teachers' psychological experiences and perceptions of curriculum supports on the implementation of a social and emotional learning. *School Psychology Review, 38*, 510-532.
- Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *Journal of Educational Research, 101*, 50-60.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*, 1-28.
- Salovey, P., & Mayer, J. (1990). Emotional intelligence. *Imagination, Cognition, and Personality, 9*, 185-211. doi:10.2190/DUGG-P24E-52WK-6CDG
- Saklofske, D. H., Austin, E. J., Mastoras, S. M., Beaton, L., & Osborne, S. E. (2012). Relationships of personality, affect, emotional intelligence and coping with student stress and academic success: Different patterns of association for stress and success. *Learning and Individual Differences, 22*, 251-257.
- 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.
- Schwarzer, R., & Hallum, S. (2008). Perceived teacher self-efficacy as a predictor of job stress and burnout: Mediation analyses. *Applied Psychology: An International Review, 57*, 152-171. doi:10.1111/j.1464-0597.2008.00359.x

- Schyns, B., & Collani, G. (2002). A new occupational self-efficacy scale and its relation to personality constructs and organizational variables. *European Journal of Work and Organizational Psychology, 11*, 219-241.
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*, 4-14.
- Slaski, M., & Cartwright, S. (2002). Health performance and emotional intelligence: An exploratory study of retail managers. *Stress and Health, 18*, 63-68. doi:10.1002/smi.926
- Slaski, M., & Cartwright, S. (2003). Emotional intelligence training and its implications for stress, health and performance. *Stress Health, 19*, 233-239.
- Solomon, D., Watson, M. S., Delucchi, K. L., Schaps, E., & Battistich, V. (1988). Enhancing children's prosocial behavior in the classroom. *American Educational Research Journal, 25*, 527-554.
- Stough, C., Saklofske, D. H., & Parker, J. D. A. (2009). A brief analysis of 20 years of emotional intelligence: An introduction to assessing emotional intelligence: Theory, research, and applications. In C. Stough, D. H. Saklofske & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, research, and applications* (pp. 3-8). New York, NY: Springer. doi:10.1007/978-0-387-88370-0\_1
- Sutton, R. E., & Harper, E. (2009). Teachers' emotion regulation. In L. J. Saha & A. G. Dworkin (Eds.), *International handbook of research on teachers and teaching* (pp. 389-401). New York, NY: Springer.
- Thomas, J. A. (1998). On becoming a good teacher: Reflective practice with regard to children's voices. *Journal of Teacher Education, 49*, 372-380.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783-805.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*, 202-248.
- Weinstein, C. (1989). Teacher education students' perceptions of teaching. *Journal of Teacher Education, 40*, 53-60.
- Wong, C. S., Wong, P. M., & Peng, K. Z. (2010). Effect of middle-level leader and teacher emotional intelligence on school teachers' job satisfaction: The case of Hong Kong. *Educational Management, Administration, & Leadership, 38*, 59-70.

- Yoon, J. S. (2002). Teacher characteristics as predictors of teacher-student relationships: Stress, negative affect, and self-efficacy. *Social Behavior and Personality, 30*, 485-494.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2009). Grace under pressure? Emotional intelligence, stress, and coping. In M. Zeidner, G. Matthews & R. D. Roberts (Eds.), *What we know about emotional intelligence* (pp. 203-222). Cambridge: MIT Press.
- Zeidner, M., & Saklofske, D. H. (1996). Adaptive and maladaptive coping. In M. Zeidner & N. S. Endler (Eds.), *Handbook of coping: Theory, research, applications* (pp. 505-531). New York, NY: Wiley.
- Zins, J. E., Payton, J., Weissberg, R. P., & Unte O'Brien, M. (2007). Social and emotional learning for successful school performance. In G. Matthews, M. Zeidner & R. D. Roberts (Eds.), *Emotional intelligence: Knowns and unknowns* (pp. 376-395). New York, NY: Oxford University Press.
- Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (2004). *Building academic success on social and emotional learning: What does the research say?* New York, NY: Teachers College Press.
- Zuercher, D. K., Kessler, C., & Yoshioka, J. (2011). The CAST initiative in Guam: A model of effective teachers teaching teachers. *US-China Education Review, 8*, 1-13.

## Chapter 3

### **EI & Teachers: Paving the Way for a Comprehensive Program Evaluation**

The preceding chapters reviewed the construct of EI as well as its impact on teachers. This chapter describes two specific aspects of the thesis. The first is a detailing of the specific EI program and its components that were used in this research. The second provides the rationale, conceptual framework, and program theory surrounding this comprehensive program evaluation. Methodology and terminology follow program evaluation standards and are described below (Astbury & Leeuw, 2010; Friedman, 2001; Grembowski, 2001; Lipsy, 1993; Weiss, 1972). While various terms that reflect the evaluation of processes are used in the exploration of the program's mechanisms, the 'causal model' approach commonly employed in program evaluation studies and research (Petrosino, 2000) is utilized here.

Though EI programs continue to show utility in increasing EI as well as in managing the potential negative effects of stress and improving positive coping outcomes, the need for an empirically-validated program remains. In other words, this work aims to replicate outcomes seen in previous research, with the added component of assessing the fidelity of program implementation and exploring potential processes by which the changes in outcomes could have occurred, i.e., the potential of the "how and why."

In *chapter 2* (Vesely et al., 2013) the high emotional demands of teaching and the resulting challenges facing teachers were outlined. The following description outlines the Swinburne EI model after which the program theory identifies how the components of the program work to address these challenges. This program is targeted specifically at teachers and is implemented here with teachers-in-training.

### **EI Model used in the Present Studies: The Swinburne EI Model (GENOS)**

The Genos model, also called the Swinburne model, is categorized under the trait framework and was developed in the context of workplace management (Palmer & Stough, 2001; Gignac, 2008). It identifies seven factors that comprise the EI construct, which alludes to the individual's self-perceptions of his or her emotional abilities. This includes a) identifying personal feelings and emotional states and the expression of those inner feeling to others; b) incorporation of emotions and emotional knowledge into decision making and/or problem

solving; c) identifying and understanding the emotions of others; d) managing positive and negative emotions within both the self and others; and e) effectively controlling the emotional states that are experienced such as in anger, stress, frustration (Gignac, 2008). Stated more explicitly, the seven factors that comprise this model include emotions attached to self-awareness, expression, awareness of others, reasoning, self-management, management of others, and self-control. This theoretical model has a corresponding self-report scale, The Genos Emotional Intelligence Test (GENOS; Gignac, 2008), that measures each of the seven factors separating a) and d) each into two different sub-factors - self and others, providing scores of 'typical performance,' and assessing the relative frequency which individuals engage in emotionally intelligent behaviors.

The Swinburne model was specifically chosen for the present studies because of its empirical support in relation to workplace climate, job satisfaction, and occupational performance (Gardner & Stough, 2002) as well as the more recent empirical support for improvement of teacher stress management (Gardner, Hansen, & Stough, 2008; Poole & Saklofske, 2009). The corresponding measure to the Swinburne model allows for assessment of the parallel EI facets that are trained throughout the program. Such self-report measures of EI have been argued to provide highest utility in workplace applications such as in relation to desired performance outcomes (Palmer, 2007). Further, the program being evaluated, though initially created for occupational development in workplace management domains, has recently been modified for specific use with teachers (Gardner, Stough, & Hansen, 2008).<sup>3</sup>

### **Implementation: The Swinburne EI Program**

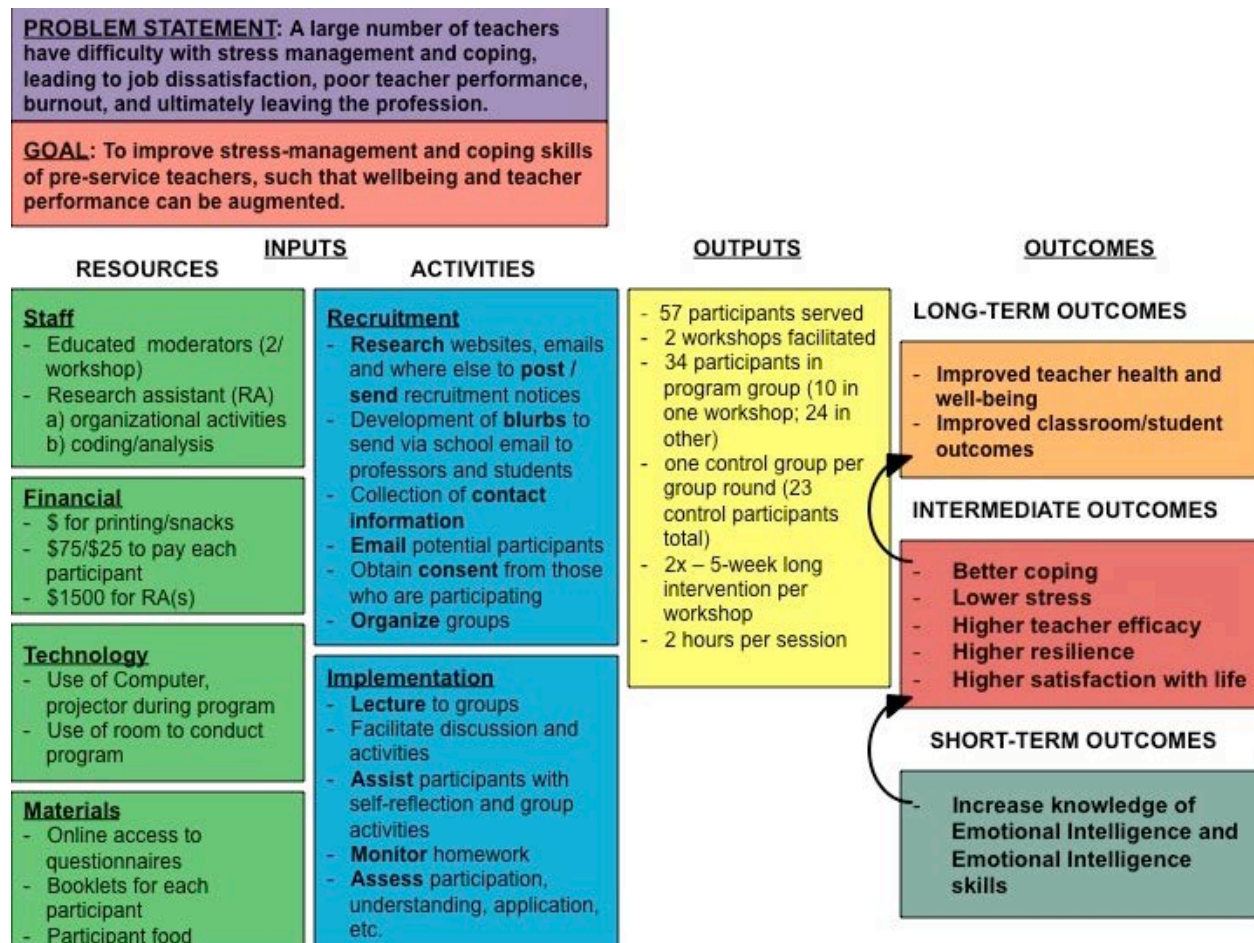
The Swinburne EI program, *Managing Occupational Stress through the development of Emotional Intelligence: A Professional Development Program for Teachers* (Gardner, Stough, & Hansen, 2008) is based on the described Swinburne model of EI and incorporates its seven facets

---

<sup>3</sup> An important note before moving forward lies in clarifying that even though the GENOS is presented within the trait framework, this is so due to its means of measurement as self-report, and does not hold the theoretical assumption of trait stability as described by personality researchers. It is imperative to re-iterate the term EI competence, as described above by Mikolajczak (2009) in order to emphasize the expectation of EI malleability as a result of EI training.

into the components of the program. A ‘logic model,’ as commonly utilized for program evaluation studies and shown in *Figure 1*, describes how the program fits together by presenting a detailed description of resource and activity inputs, outputs, and outcomes involved in the evaluation.

**Figure 1: Logic Model of Implementation**



Note. Outputs refer to the numbers of the second two phases of the evaluation.

The general focus of the program is on the development of skills related to emotional self-awareness and expression, as well as emotions attached to awareness of others, reasoning, self-management, management of others, and self-control. Each of these content areas relate specifically to teacher-relevant contexts and are taught with a classroom perspective in mind. The program consists of five group sessions, each approximately two hours long, utilizing a workshop format that involves lectures, group discussions, workbook exercises, and home assignments. The evaluation of outputs reflects both quantitative and qualitative data. The



components of the program include: psychoeducation, education and demonstration of coping skills, scenario discussions, group activities, homework, self-reflection, worksheets, and goal-setting exercises. Each of these propensities is dependent upon the content of daily presentations. Examples of component descriptions appear in *Table 26 (Appendix A)*. An overview of the content of each session of the program is found in *Table 27 (Appendix A)*. Organizational and activity-based changes to the original program can be found in *Appendix C*.

### **Rationale for Comprehensive Program Evaluation: Conceptual Framework**

This study follows standard program evaluation methodology with the inclusion of process measures that reflect implementation and participant satisfaction in addition to an outcome evaluation (Astbury & Leeuw, 2010; Friedman, 2001; Grembowski, 2001; Lipsy, 1993; Weiss, 1972). Prior to describing the individual sections, an overview of the theoretical framework for evaluation follows.

The purpose of this evaluation was not only to assess the impact of the entirety of the program on various outcomes, but also to ensure fidelity and program integrity of each of the components. Such design was proposed in order to avoid the frequent mistake made by many researchers in program evaluation, namely the “black-box-design” that assumes the program process without documenting its content and delivery (Astbury & Leeuw, 2010) or the analysis of outcomes of an intervention without assessing each individual mechanism and the components that comprise it. If outcomes are measured without ensuring accurate implementation of delivery and/or participation and understanding of program content, there remain questions regarding whether non-significant findings reflect the program itself or the failure to implement the program as intended.

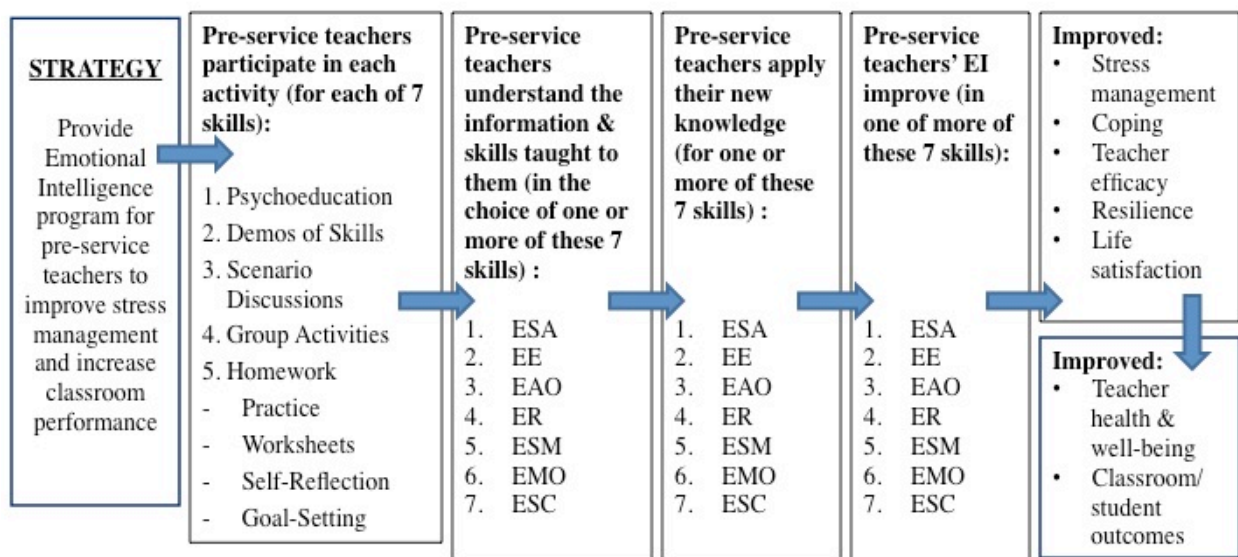
To assess and confirm the assumptions underlying service delivery and the processes of this EI program for teachers, causal (*Figure 2*) and logic (*Figure 1* above) models were developed. These models provide a means through which to disentangle these underlying assumptions by providing a theory of implementation as well as a theory of cause and effect (Bishop & Vingilis, 2006; Grembowski, 2001).

A theory of implementation refers to the strategies or features of a program that are involved with the delivery of services. A theory of cause and effect refers to the step-by-step explanation of how the program will cause its short, intermediate, and long-term outcomes based

on the underlying assumptions (Grembowski, 2001; Petrosino, 2000). A description of the program theory, which aids in the identification of mechanisms leading to program outcomes, is detailed (Astbury & Leeuw, 2010).

**EI Training as a Support for Teachers: Theory of Cause and Effect.** The causal model for the teacher EI program, as commonly employed in program evaluation research (e.g., Petrosino, 2000) and summarized in *Figure 2*, presents the hypothesized causal pathways that the pre-service teachers followed as they progressed through the program. These pathways attempt to articulate the program theory, building “an explanatory account of how the program works, with whom, and under what circumstances” (Astbury & Leeuw, 2010; p.365). It emphasizes the possible basic mechanisms required in order for the intended outcomes to have an impact.

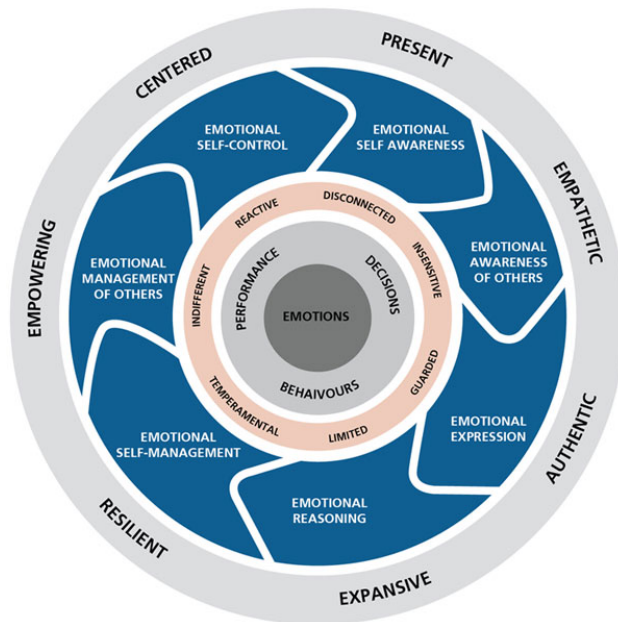
**Figure 2: Causal Model – What are the Pathways?**



*Note.* Each of the shorter arrows refers to an “if-then” statement, where if one assumption is met, then the next assumption may begin, and propels forward onto the next. It is important to note that this diagram simplifies the possible mechanisms; ESA = emotional self-awareness; EE = emotional expression; EAO = emotional awareness of others; ER = emotional reasoning; ESM = emotional self-management; EMO = emotional management of others; ESC = emotional self-control.

The seven-factor model of EI distinguishes seven separate facets of EI. Each of these is hypothesized to influence an individual's general EI. The Genos theoretical model, summarized in *Figure 3*, identifies moods and feelings in the center of the model as emotions that are not just experienced, but that influence decisions, behaviors, and performance (Palmer & Stough, 2001;

**Figure 3: GENOS EI Model (Gignac, 2008)**



Gignac, 2008). As a result, the skills related to emotion that appear as seven skills within the dark blue circled area, represent those which aid individuals to perceive, understand, and manage emotions such that one positively impacts decisions, behaviors, and performance at work (in this case in the classroom). The outermost ring corresponds to the positive characteristics and expressions that would result from increased ability in EI skills that suggest individuals would be present, empathetic, and resilient, for example, versus those who are less skillful, would be described by characteristics in the

third circle from the center as disconnected, insensitive, and temperamental. Each of these adjectives is descriptive of the behaviors corresponding to one of the seven EI skills. For instance, an individual with high emotional self-awareness (ESA) may be perceived as present with his or her decisions, behaviors, and performance matching this description, whereas individuals low in ESA might be viewed as acting in a manner that is disconnected (Palmer & Stough, 2001; Palmer, Stough, Hamer, & Gignac, 2009). Referring back to *Figure 2*, the causal model, this EI theory provides the foundation for the *final three* boxes, namely the pathway from EI to outcomes. Specifically, the model can be used to understand how an increase in each of these seven skills could lead to an increase in outcomes such as improved stress management, coping ability, teaching efficacy, and resilience, each of which was measured in this dissertation. Using emotional expression (EE) as an example, an individual who is skillful in expressing his or her emotions, would be an open communicator, speak directly to the appropriate individual at the

right time, thus leading to positive outcomes such as being perceived as effective in the classroom.

It is important to note that the causal model in *Figure 2* represents the seven EI skills individually. Though the GENOS EI model in *Figure 3* is not specifically noted to be hierarchical, its theory does imply some foundational skills. For example, referencing a need for emotional self-awareness may be seen as a requisite to effectively expressing, managing, and controlling emotions. This 7-facet model was based originally on the hierarchical model of Mayer and Salovey (1990). However, the GENOS model does not indicate a hierarchy directly. As a result the causal model identified here lists the seven skills individually, but acknowledges that the theoretical underpinnings for how the skills aid one-another, or are required to build on each other, are unclear. As noted, competing theories are often controversial, reflected in different models indicating different relationships to one another (Salovey & Mayer, 1990 vs. Petrides et al., 2009), and remain mostly undefined in terms of the necessity of the acquisition of one skill for the other. This being said, the correlations between each of the seven facets (Gignac, 2008) are an aid in determining which facet may be more or less related to one another, with the factor structure denoting the relevance of each factor to general EI. However, for the purposes of this dissertation, this causal model leaves open the possibility that multiple skills may be required to improve other skills, such as ESA being necessary for EE, but does not assert this notion. For example, it is possible that a lack of verbal articulation of the awareness of emotions may not translate into ineffectively expressing and managing them. However, the theory does assert that the acquisition of each skill individually should lead to some improvement in that specific skill itself such as learning ESA skills (e.g., mindfulness practice) will lead to increased ESA.

It is important to discuss the *first four boxes* of the causal model, namely, the acquisition of skills and the mechanisms by which this EI learning occurs. In terms of theory, the authors of the program do not specifically assert that the processes of their training are theoretically grounded, noting that it is based on empirical evidence in support of specific activities and training modules that have previously indicated an increase in particular EI skills (e.g., Gardner, 2005; Gardner, Stough, & Hansen, 2008). Since a theory-driven evaluation includes both a conceptual and an empirical component (Rogers, Hasci, Petrosino, & Huebner, 2000), the

subsequent section describes the original program development as well as the rationale behind the use of certain components for the teacher-specific program.

***Empirical Component.*** The original *Swinburne Stress Management Program* (SSMP) was aimed at the general workplace and employed an earlier Swinburne model, which had only five factors (Gardner, 2005). This provided the foundation for the current seven-factor EI program, which combined typical aspects of stress management with EI development. Gardner (2005) classifies the SSMP as a secondary intervention according to Kendall, Murphy, O’Neill, & Bursnall’s (2000) categorization of approaches to managing stress. This involves intervention strategies that are designed to change individual’s reactions to stressors.

The SSMP involves three primary components that are foundational to the program: 1) conceptual information regarding stress and its relationship to EI, 2) self-assessments that build awareness of strengths and weaknesses in individual EI, and 3) skills training that aid the development of strategies for coping (Hansen, Gardner, & Stough, 2007). Components 1 and 2 are placed in the causal model summarized in *Figure 2* under “psychoeducation” and component 3 under the remaining activities in the same (2<sup>nd</sup>) box.

In addition to these foundational components, the SSMP incorporated a number of empirically supported exercises shown to be effective in programs focused on training for empathy, anger management, and conflict management (Gardner, 2005). Empirically-based activities from the original program development can be seen in *Table 28* in *Appendix A*, which depicts a list of activities comprising the original program, alongside the EI skill(s) they are meant to increase, and the evidence that supports the activity’s efficacy. These include exercises that ask participants to identify situations that trigger emotional reactions and those that aid individuals in learning how to manage those situations more effectively as suggested by Howells et al. (2005); for example, relaxation or cognitive restructuring. These activities have shown to increase EI dimensions such as EI recognition and expression, emotional management, and emotional control (Gardner, 2005).

The teacher-specific program (Gardner, Stough, & Hansen, 2008) was built upon the SSMP program utilizing the updated seven-factor GENOS model while adding a teacher-specific focus with activities that incorporate examples oriented to the classroom. For the most part, these activities kept the same rationale and empirical support, but were contextualized to a teacher

audience. The program used in this dissertation was a slightly altered version of this teacher-specific program with adaptations by this author, incorporating changes that were of organizational and logistical nature. A number of additions also included content changes which added a more clinically-based focus to certain activities or demonstrations, increased participant involvement through discussion and practice, and added more in-depth contextualization of examples. A review of specific changes for each revision is presented in *Appendix C*.

***Conceptual Component.*** Despite the original program development not being driven directly by theory, the process by which these skills are acquired throughout the program can be theoretically explained. The causal model, *Figure 2*, summarizes the model with a focus on changes and objectives at the teacher level, which hypothesize the stages and acquisition of EI skills leading to more general positive outcomes. The assumptions of this teacher EI program hypothesize that, if pre-service teachers are provided with the above-described EI program and all of its components, then pre-service teachers will choose to *participate* in the required components of psychoeducation, demonstration of coping and other skills, scenario discussions, group activities, and homework that includes self-reflections, worksheets, practice, and goal-setting. Participation would lead to *understanding* of information and skills taught, which would then translate into *application* of these skills. If skills are applied, higher levels of EI in one or more domains of EI applied should result. There is an awareness that this is a simplified model, as there are numerous possible pathways, with each of the program components directing the pathways. For example, psychoeducation involves learning about the stress process and how EI skills may help to mitigate the effects of stress generally, and then specifically, how each EI skill can help decrease certain negative outcomes in individuals. Each participant should understand this explanation generally and then individually apply this understanding to his own actions and routine.

Using emotional expression as an example, participants would need to understand how individuals generally express emotions on a continuum of maladaptive to adaptive, further understand how they personally express emotions in a given situation, and determine if this expression is adaptive or not. If an individual, for example, becomes aware that he tends to express negative emotions through body language, he would then set a goal to ‘check in’ with himself (which is one of the skills learned in session one), at certain time points throughout the day, and practice softening these maladaptive movements. In this case, each component, self-

reflection, practice outside of session, and other homework activities, may facilitate an awareness and acquisition of emotional expression. After applying this exercise for a period of time, dependent on the degree to which it is engrained, the unwanted negative body language should decrease, thus improving emotional expression skills.

This general trajectory could be theoretically supported using a number of skills acquisition models such as those used to understand stress appraisal and acquisition of coping resources (e.g., Lazarus, 1993; Lazarus & Folkman, 1987), as well as cognitive behavioral theory from the clinical intervention literature (D. Dobson & Dobson, 2009; K. Dobson & Dozois, 2001). Development of these skills generally requires psychoeducation, insurance of the understanding of the information, generation of self-awareness around personal behavior, and application of new skills to induce behavioural change. This fits with the causal model's trajectory of: participation → understanding → application, especially given a consideration of the composition of skills. It can be argued that skills are comprised of both declarative and procedural knowledge (Fiori, 2009), which would mean that in order to develop a skill, new knowledge must be gained and then applied in the necessary context. Specifically relating this to EI skills acquisition, Fiori (2009) draws upon the top-down approach in the cognitive literature (Sun, Peterson, & Merrill, 1996) to describe how EI knowledge can develop into an applicable skill through practice, as it strengthens the relationship between declarative and procedural knowledge. This would refer to gaining a better understanding of general emotions and then being able to contextualize and apply these emotional competencies. Other models also emphasize the need for practice (Howells et al., 2005; Huppert & Johnson, 2010) in order for behavior change to occur, something that is also emphasized in this program.

It is also possible that one of the primary mechanisms that drives change is an increase in general self-awareness and self-reflection (e.g., Kong, 2010; Shapiro, Schwartz, & Bonner, 1998). This introspection could be seen as an important step in understanding how skills apply to the individual, thus facilitating the pathway to application of skills and ultimately to behavior change. This is particularly relevant to this program, as one of the EI facets is emotional self-awareness. In line with this, the program includes an activity that involves identifying situations that might elicit negative emotions and thus are likely to trigger poor emotional control (Gardner, 2005). The activity, taught in the emotional self-control module, is intended to create a general sense of awareness to facilitate a plan for behavior change.

The overarching causal model may also be influenced by theories of behavior change and social cognition, reflected in the theories of planned behavior (TPB; Ajzen, 1991) and self-efficacy (Bandura, 1986). The TPB addresses the relation between beliefs and behavior by emphasizing that attitudes toward behavior, subjective norms, and perceived behavioral control impact an individual's intention to perform a behavior and thus their actions. Relatedly, and sometimes overlapping, self-efficacy theory can play a role as well. Self-efficacy theory involves the understanding and application of skills learned, reinforcement through past experiences, physiological and verbal feedback, and vicarious experiences. Specifically, by improving knowledge about EI-related skills, one would improve teachers' confidence in using such skills, which may lead to higher perceived self-efficacy in teaching. Given that self-efficacy is a strong predictor of behavior, if teachers feel efficacious in managing stress, this may impact their ability to do so in practice. This notion of perceived efficacy of various skills having an impact on performance, behavior, and other outcomes has been highlighted in a variety of contexts and shown to bring about changes that are measured using more objective measures such as other reports and performance measures (e.g., Keefer, 2015). These additional theories may further explain why individuals would choose to engage in the EI program as well as their continued engagement and motivation throughout the workshop series.

The causal model represents a simplified trajectory. Hence, multiple possible interruptions could be considered: a) partial participation, completing any number of combinations of the components, for only some or all of the skills, which would result in improvement only for those skills for which the full pathway was realized, b) lack of understanding or incorrect application of information/skills such as engaging in all the activities but setting goals/practicing in a way that misapplies the tools, c) lack of 'practice' which while reflecting an understanding of the information and skills taught, does not provide adequate practice to induce behavioral change, and d) limited self-introspection or ability to self-reflect. Each of these factors are recognized and measured in order to provide a more complete theoretical understanding of the program theory. It is also important to note that related factors such as motivation (Millet & Rollnick, 1991) and the individual's 'readiness for change' (Prochaska, DiClemente, & Norcross, 1992) have been previously examined when assessing learning and change theories and noted to have a significant impact on behavioral outcomes. For the purposes of this dissertation, it is assumed that the voluntary nature of this study resulted in



participants who met most of these criteria, specifically those related to motivational factors. A summary of these study limitations is provided in the discussion.

### **Evaluation Objectives**

This comprehensive evaluation assessed the above-described theory-driven EI program for teachers, inclusive of processes, and short and intermediate outcomes. The evaluation was based upon the quantitative and qualitative data collected and analyzed in order to measure each step of the proposed causal model. This program evaluation was aimed at the following objectives:

*Objective 1:* To evaluate whether the pre-service teachers in the EI program group self-reported higher EI relative to the control group over the five weeks of the program and at follow-up time points.

*Objective 2:* To evaluate the impact of the EI program on pre-service teacher related outcomes (stress, coping, resilience, teacher efficacy, life satisfaction). This would imply assessment of whether the EI program group rated themselves lower on stress and higher on coping ability, resilience, life satisfaction, and teacher efficacy post-program relative to the control group over the five program weeks and at follow-up time points.

*Objective 3:* To evaluate the fidelity with which the program was delivered to pre-service teachers (i.e., evaluate effective implementation and presentation).

*Objective 4:* To evaluate the pre-service teachers' participation, understanding of information/skills learned, and the extent to which they applied the skills learned during the program.

It is noteworthy that the above objectives evaluate process and outcome at the program and teacher levels. Evaluations at the *Classroom Level* were not part of this study. If this part of the evaluation were to be conducted, it would involve *Objective 5*, an evaluation of the impact of higher teacher EI on student and classroom outcomes and hence could speak to the degree to which students of teachers from the program group report higher levels of classroom climate and other academic outcomes at 1-2 years follow-up relative to the control group.

The subsequent two chapters detail the three rounds of EI program administration. *Chapter 4* consists of a description of the organization of the studies and the pilot study. *Chapter*

5 details the second two administrations of the program and discusses the full program evaluation.

### References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and Human Decision Processes* 50(1), 179-211. doi:10.1016/0749-5978(91)90020-T
- Astbury, B., & Leeuw, F.L. (2010). Unpacking black boxes: Mechanisms and theory building in evaluation. *American Journal of Evaluation*, 31, 363-381. doi: 10.1177/1098214010371972
- Austin, V., Shah, S., & Muncer, S. (2005). Teacher stress and coping strategies used to reduce stress. *Occupational Therapy International*, 12(2), 63-80.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice- Hall.
- Bishop, J. E. H., & Vingilis, E. (2006). Development of a framework for comprehensive evaluation of client outcomes in community mental health services. *The Canadian Journal of Program Evaluation* 21(2), 133-180.
- Dobson, D., & Dobson, K. S. (2009). *Evidenced-based practice of cognitive-behavioral therapy*. New York: Guilford.
- Dobson, K., & Dozois, D. (2001). Historical and philosophical basis of cognitive-behavioral therapy. In K. Dobson (Ed.), *Handbook of cognitive-behavioral therapies* (pp. 3–39). New York: Guilford.
- Fiori, M. (2009). A New Look at Emotional Intelligence: A Dual-Process Framework. *Personality and Social Psychology Review* 13(1), pp. 21-44, 2009.
- Friedman, V. J. (2001). Designed Blindness: An Action Science Perspective on Program Theory Evaluation. *American Journal of Evaluation*, 22(2), 161–181.
- Gardner, L. (2005). *Emotional Intelligence and Occupational Stress* (Unpublished dissertation). Hawthorn, Australia: Swinburne University of Technology.
- Gardner, L., Stough, C., Hansen, K. (2008). *Managing Occupational Stress through the development of Emotional Intelligence*. Professional Development Program for Teachers. Swinburne, Australia.
- Gignac, G. E. (2008). *Genos Emotional Intelligence Inventory: Technical Manual*. Sydney, NSW. Genos Press.
- Grembowski, D. (2001). *The Practice of Health Program Evaluation*. Thousand Oaks, CA: Sage.

- Hansen, K., Gardner, L., & Stough, C. (2007). Improving occupational stress through emotional intelligence development. *Organizations and People, 14*, 70-75.
- Howells, K., Day, A., Williamson, P., Bubner, S., Jauncey, S., Parker, A., & Heseltine, K. (2005). Brief anger management programs with offenders: Outcomes and predictors of change. *The Journal of Forensic Psychiatry and Psychology, 16*, 296-311.
- Huppert, F. A., & Johnson, D. M. (2010). A controlled trial of mindfulness training in schools: The importance of practice for an impact on well-being. *The Journal of Positive Psychology, 5*(4), 264-274.
- Kendall, E., Murphy, P., O'Neill, V., & Bursnall, S. (2000). *Occupational stress: Factors that contribute to its occurrence and effective management*. Canberra, Australia: Centre for Human Services, Griffith University.
- Kong, S. C. (2010). Using a web-enabled video system to support student–teachers' self reflection in teaching practice. *Computers & Education, 55*(4), 1772-1782.
- Koplan, J. P., Milstein, R., & Wetterhall, S. (1999). Framework for program evaluation in public health. *MMWR: Recommendations and Reports, 48*, 1-40.\*
- Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Psychosomatik Medicine, 55*, 234-247.
- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality, 1*, 141-170.
- Lipsy, M. W. (1993) Theory as method: Small theories of treatments. *New Direction in Program Evaluation, 57*, 5-38.
- Salovey, P. & Mayer, J. (1990). Emotional Intelligence. *Imagination, Cognition, and Personality, 9*, 185-211. doi:10.2190/DUGG-P24E-52WK-6CDG
- Mezirow, J. (1981). A critical theory of adult learning and education. *Adult education quarterly, 32*(1), 3-24.
- Millet, W. R., & Rollnick, S. (1991). *Motivational interviewing*. New York: The Guilford Press.
- Palmer, B. R., & Stough, C. (2001). The measurement of emotional intelligence. *Australian Journal of Psychology, 53*, 85.
- Palmer, B. and Stough, C. (2001). Workplace SUEIT: Swinburne University Emotional Intelligence Test – Technical Manual, Organizational Psychology Research Unit, Swinburne University, Hawthorn.

- Palmer, B. R., Stough, C., Hamer, R., & Gignac, G. E. (2009). Genos Emotional Intelligence Inventory. In C. Stough, D. Saklofske, & J. Parker (Ed.), *Advances in the measurement of emotional intelligence*. New York: Springer.
- Petrides, K. V. (2009). Technical manual for the trait emotional intelligence questionnaires (TEIQue). London: London Psychometric Laboratory.
- Petrosino, A. (2000). Answering the why question in evaluation: The causal-model approach. *Canadian Journal of Program Evaluation*, 15(1), 1-24.
- Prochaska J. O., DiClemente, C. C., Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *Am. Psychol*, 47, 1102–1114
- Rogers, P. J., Hacsı, T. A, Petrosino, A., & Huebner, T. A. (Eds.) (2000). Program theory in evaluation: Challenges and opportunities. *New Directions for Evaluation* (No. 87). San Francisco, CA: Jossey-Bass.
- Vesely, A. K., Saklofske, D. H., & Leschied, A. D. W. (2013) Teachers - The vital resource: The contribution of emotional intelligence to teacher efficacy and wellbeing. *Canadian Journal of School Psychology*, 28(1), 71-89. doi: 10.1177/0829573512468855
- Shapiro, S.L., Schwartz, G.E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine*, 21, 581–599.
- Sun, R., Peterson, T., & Merrill, E. (1996). Bottom-up skill learning in reactive sequential decision tasks. *Proceedings of the 18th Cognitive Science Society Conference* (pp. 684-690). Mahwah, NJ: Lawrence Erlbaum Associates, Inc
- Weick, K. E. ,& Quinn, R. E. (1999). Organizational change and development. *Rev. Psychology*, 50, 361–86.\*
- Weiss, C. H. (1972). *Evaluation*. Upper Saddle River, NJ: Prentice Hall.
- Weiss, C. H. (1997). Theory-based evaluation: Past, present, and future. *New directions for evaluation*. (No. 76). San Francisco, CA: Jossey-Bass.

## Chapter 4

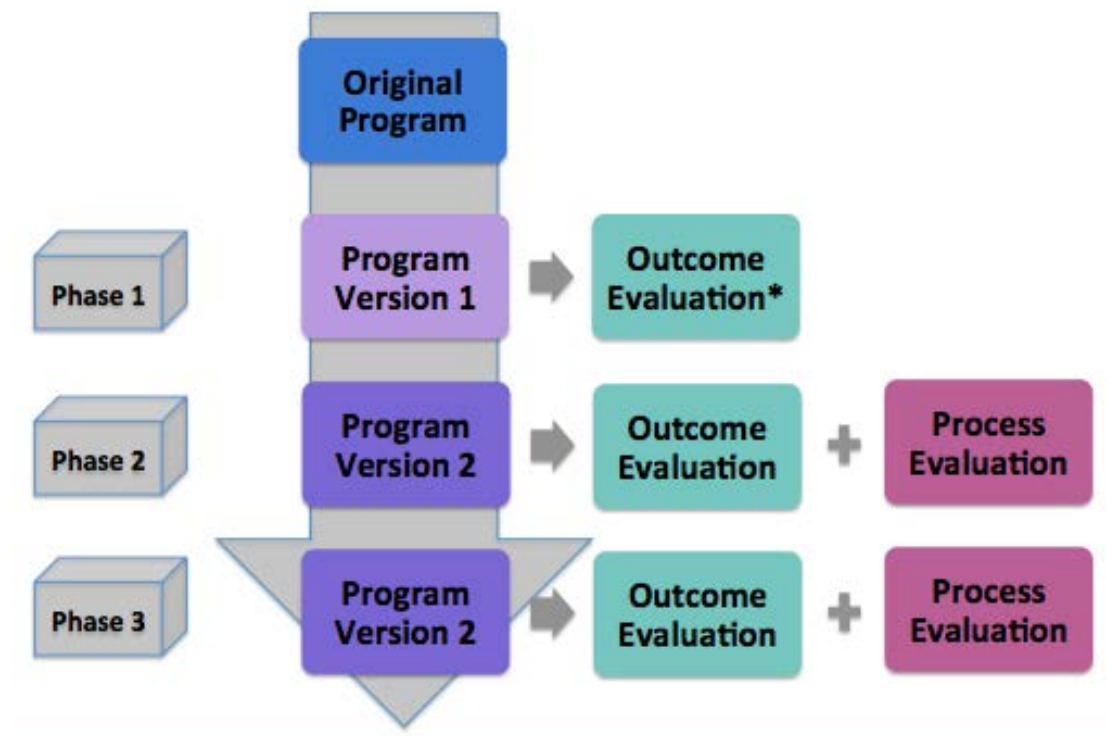
### **The Present Study: Administering the EI Training Program**

This chapter outlines the organization of all phases of administration of the EI program for teachers and follows with the outcome evaluation from phase one.

#### **Study Set-up and Phases of Data Collection**

This dissertation is divided into three phases of data collection as drawn from the administration of several versions of the EI training program, *Managing Stress through developing Emotional Intelligence: A Professional Development Program for Teachers* (Gardner, Hansen, & Stough, 2008). *Figure 4* provides an overview of the study set-up. Results of each of the studies are divided into two parts: a) an outcome evaluation involving program outcomes related to psychological health and wellbeing as well as performance self-efficacy of participants and b) a process evaluation, the results of which involve the fidelity of implementation of each step of the program. Phase one includes an outcome evaluation only, focused solely on the initial success of the program. Phases two and three include both outcome and process evaluations. The added process evaluation allows the researcher to unpack potential processes by which change may occur. The rationale for more than two phases resides in the difficulty with attrition that required further recruitment, as well as the advantages of having smaller classroom sizes to promote small-group discussion.

Procedures of each phase will be described within their corresponding chapters; however, a detailed outline of measures used for the outcome evaluations of each phase is outlined in *Table 29 (Appendix A)*. This allows for easy appraisal of differences as well as provides a description and rationale for use at each of four collection time points that included pre-program, post-program, one-month, and six-month follow-up time points. Though there are slight differences in the inclusion of measures between phases one and the subsequent two phases, most of the scales are administered in all phases and the process evaluations for phases two and three are congruent with one another. Unless specified in the description column under 'Discrepancy,' in *Table 29 of Appendix A*, each listed measure was used in all phases of the data collection and at all time points of each phase excluding phase one, which did not collect six-month follow-up data.

**Figure 4: Dissertation Set-up**

*Note.* Phases two and three contain a slightly revised list of the questionnaires from phase one. The separate colours represent different versions of the program in between which changes were made to the content and organization of the information.

### **The Present Study: Phase One – Outcome Evaluation Only**

This chapter includes the write-up of phase one, previously published in the *Journal of Personality and Individual Differences* (and thus containing some repetition throughout the literature review<sup>4</sup>) and is inserted below. Phases two and three are detailed in *Chapter 5* and comprise phases two and three of data collection grouped into one segment of analysis. Descriptions of the revisions to the program versions can be found in *Appendix C*.

<sup>4</sup> To avoid repetition, the reader may move ahead to the 'present study' section on page 76 of the subsequent article.

## Emotional Intelligence Training and Pre-Service Teacher Wellbeing<sup>5</sup>

### Abstract

Teaching is a profession of high occupational stress and ‘emotional labour’ that can potentially result in job dissatisfaction, mental health problems, and leaving the profession. Emotional intelligence (EI) encompasses an array of emotional competencies that facilitate the identification, processing, and regulation of emotion and may enhance successful stress management, as well as augmentation of teacher well-being and classroom performance. Drawing upon research that EI can be developed through specific training, a modified version of the program, ‘Managing Occupational Stress through the Development of Emotional Intelligence’ (Gardner, Stough, & Hansen, 2008), was administered to pre-service teachers over a five-week period. A control group completed only the questionnaire protocol of EI and other measures at the start, end, and one month following the program. Results were generally in line with those obtained by Poole and Saklofske (2009) suggesting that EI and related psychological well-being variables can be positively impacted by focused EI training.

### Keywords

emotional intelligence training program; teacher efficacy; coping; stress; wellbeing

### Introduction

Teaching is recognized as one of the most important occupations in contemporary society, given the teacher’s pivotal role in student learning and achievement and the preparation of children and adolescents for life and its responsibilities as adults (e.g., McIntyre & Battle, 1998; Murphy, Delli, & Edwards, 2004). However, for decades, researchers and educators have also described the detrimental impact of teacher stress in Canadian schools and its cost to both the education system and society at large (Savage, Saklofske, & Mollard, 1988). Teaching can

---

<sup>5</sup> The following article has been previously published. Permission to include article in dissertation was granted by Elsevier publications – permission email included in *Appendix D*. Citation:  
Vesely, A. K., Saklofske, D.H., & Nordstokke, D. W. (2014). EI training and pre-service teacher wellbeing. *Personality and Individual Differences*, 65, 81-85. Doi: 10.1016/j.paid.2014.01.052



certainly be described as a job of high ‘emotional labour’ (Brennan, 2006; Hargreaves, 1998) with elevated levels of occupational stress (e.g., Chang, 2009; Kokkinos, 2007), often resulting in job dissatisfaction, mental health problems, and leaving the profession (Chan, 2006).

The causes of stress in teaching are quite variable, ranging from managing large classes of diverse students to substantial expectations from parents and administrators. However, it is the ‘stresses and strain’ that result from these, often excessive and continuous, emotional demands that ultimately impact not only teachers, but the educational, personal, social, and emotional outcomes of their students (Chan, 2006). The new movement in current research, with an emphasis on school-based mental health (Leschied, Flett, & Saklofske, 2013), has recently directed attention to addressing negative psychological outcomes resulting from these emotional demands. An overdue focus is now being placed on supporting the psychological health and wellbeing of teachers.

The assumption that teachers can ‘naturally’ manage stress effectively has been challenged (Austin, Shah, & Muncer, 2005; Parker, Saklofske, Wood, & Collin, 2009). While there is evidence that modifying environments and providing required support structures can impact teacher stress (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010), successfully managing stress can be further enhanced by providing individuals with an increased capacity to cope and address the physiological and psychological effects of stress that in turn, lead to increases in one’s personal and professional sense of wellness and well-being. Though researchers are cognizant of the need to support the psychological health of teachers, there remains a dearth of applicable, empirically based training programs aimed at effectively managing teacher stress in the classroom.

### **Emotional Intelligence and Teacher Stress**

Emotional intelligence (EI), encompassing an array of emotional competencies that facilitate the identification, processing, and regulation of emotion (Austin, Saklofske, & Egan, 2005), has been shown to provide an avenue for supporting psychological and physical health and wellbeing. Drawing upon research from psychology, education, and occupational management, it has been argued that higher levels of EI can mediate stress escalation and improve its management (e.g., Chan, 2006; Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012), that EI can help facilitate effective teaching (e.g., Perry & Ball, 2005), and that EI skills

overlap with and may contribute to or underlie a large portion of the positive factors comprising teacher efficacy (Vesely, Saklofske, & Leschied, 2013).

It has been consistently reported that higher EI is associated with less occupational stress and greater psychological and physical health (see Stough, Saklofske, & Parker, 2009), in addition to facilitating adaptive coping and managing adverse situations effectively in a variety of circumstances (e.g., Brackett & Katulak, 2007; Humphrey, Curran, Morris, Farrell, & Woods, 2007; Zeidner, Matthews, & Roberts, 2009). Brackett and Katulak (2006) reported on the positive relationship between increased social and emotional skills, and effective teaching and teacher wellbeing. Perry and Ball (2005) described the greater attunement to the emotional needs of others, ability to interact with students in ways that extend individualized learning opportunities, and more effective management of their own emotional responses in those teachers with higher EI. Such examples highlight the potential importance of EI in education and their effect on interpersonal and intrapersonal outcomes in the workplace. Furthermore, research has provided preliminary evidence that EI capacity and skills can be developed through specific EI-program training (e.g., Gardner, 2005; Parker et al., 2009; Poole & Saklofske, 2009).

### **Teachers, Pre-Service Teachers, and EI Training**

Programs have been developed to manage occupational stress through EI training (Hansen, Gardner, & Stough, 2007). More general applications of EI principles have been utilized to improve emotional management and regulation including mindfulness-based EI training (Ciarrochi, Blackledge, Bilich, & Bayliss, 2007), a theory-based practical training of EI skills (Kornacki & Caruso, 2007), and an EI development course within a variation of the Leadership Executive Assessment and Development program (Boyatzis, 2007; see also Cherniss & Adler, 2000). Researchers have been successful in improving EI skills in various groups ranging from UK managers (Slaski & Cartwright, 2003) to university students at risk for dropout (Parker, Hogan, Eastabrook, Oke, & Wood, 2006). Research also suggests that resilience, the management of the stress, and ways of addressing adverse situations can be improved by increasing EI. Gardner (2006) also showed EI training to be effective in increasing self-reported EI, organizational commitment, and job satisfaction as well as in reducing occupational stress.

The EI training program by Hansen and colleagues (2007) has been adapted for use with teachers (“Managing Occupational Stress through the Development of Emotional Intelligence”)

as well as for both teachers and students (Hansen, 2010; ‘‘Emotional Intelligence in the Classroom’’). An evaluation of the former, the original Australian program, was successful in increasing the participants’ EI, reducing their occupational stress, and improving their psychological and physical wellbeing (Gardner, 2005). A study of this program with Canadian student teachers suggested that EI scores did increase at the conclusion of the program and one month following completion (Poole & Saklofske, 2009). Encouraged by these findings, more studies are needed to provide further evidence for the use of such training within pre-service teacher programs, and to empirically validate the specific outcomes of EI programs.

### **The present study: Program version One – Phase One<sup>6</sup>**

The present study is part of an ongoing research program evaluating the efficacy and effectiveness of emotional intelligence training for teachers. The program currently used in our research is a revised version of the training modules based on the Swinburne emotional intelligence model described by Palmer and Stough (2001). Considering the links between higher levels of EI, lower occupational stress, and increased psychological and physical wellbeing (Chan, 2006; Gardner, 2005; Nikolaou, 2002; Pau & Croucher, 2003; Slaski & Cartwright, 2002; 2003), there is considerable potential in exploring options for increasing EI in teachers. The purpose of this investigation is to provide further empirical support for EI training with pre-service teachers (individuals in teacher’s college) as this is a critical time to focus on enhancing EI skills with the further intention of preventing negative outcomes related to both teacher health and wellbeing.

‘‘Teachers-in-training’’ or pre-service teachers are particularly ‘‘vulnerable’’ to the multitude of stressors found in the early years of their careers, which is likely a major reason such a large number leave teaching within the first 5–6 years. Palomera and colleagues (2008) have argued that pre-service teacher training programs are the ‘‘priority educational context’’ for developing emotional competencies in teachers in the short term but also for promoting ongoing personal and professional development. Kyricacou (2001) further recommended that research is required to assess the effectiveness of particular intervention strategies directed at reducing

---

<sup>6</sup> This title has been altered slightly from the original article to create higher level of congruence between chapters of this dissertation.

teacher stress. While there are many programs that have found their way into schools, few are theoretically grounded or have been empirically evaluated. This has led Jennings and Greenberg (2009) to call for a systematic research agenda to address and evaluate the potential efficacy of teacher intervention strategies that are intended to promote their social and emotional competence.

Consistent with the discussed literature, it was expected that those pre-service teachers who completed the five week EI training program would show significant increases in both measures of EI as well as measures of resiliency, efficacy, wellbeing, and alternatively, decreases in self-reported stress and anxiety. In contrast, and as expected, we predicted the control group would not show significant changes in any of the measures from pre to post testing.

## **Method**

### **Participants and Procedure**

Participants were 49 undergraduate teacher candidate students (89% female) with a mean age of 26.5 years ( $SD = 6.19$ ) who were recruited from two large Canadian universities. Participants from one university comprised the group who received the EI training program ( $N = 23$ ) and those from the other university served as control subjects ( $N = 26$ ). Participants in the EI group completed the battery of measures at the start and end of the EI program (pre and post-test) as well as at one-month follow-up. Those in the program group participated in five consecutive weeks of an EI program, each consisting of a group session approximately one and a half hours in length, utilizing a workshop format, group discussion, and workbook exercises followed by home assignments (e.g., skill practice). The skill development program was based on the Swinburne EI model consisting of modules on emotional self-awareness and expression, emotions attached to awareness of others, reasoning, self-management, management of others, and self-control. The control group completed the online questionnaire portion of the study, completing measures on only two occasions corresponding to the pre- and post-test times of the EI group.

## Measures

**Demographics questionnaire (DQ).** The DQ is a brief questionnaire providing information on age, sex, gender, previous education, grades, ethnicity, language, and extracurricular activities.

**Emotional intelligence (EI).** Two measures of EI were used in this study to capture different perspectives. The *Trait Emotional Intelligence Questionnaire – Short Form* (TEIQue-SF; Petrides, 2009) is a 30-item scale that provides a global trait EI score. A 7-point Likert scale, ranging from 1 (completely disagree) to 7 (completely agree), is used to assess the individual's self-perceived abilities and behavioural dispositions. Cooper and Petrides (2010) reported high levels of internal consistency ( $\alpha = .89$  for men;  $\alpha = .88$  for women) for global trait EI. The second EI measure used was the *Wong and Law Emotional Intelligence Questionnaire* (WLEIS; Wong, Wong, & Law, 2007), which is a self-report EI measure with four ability dimensions based on the appraisal, understanding, expression, and management of emotion in the self and others. This scale contains 16 items rated on a 7-point Likert-type scale (1 = totally disagree, 7 = totally agree). There are four subscales in the questionnaire: Self Emotion Appraisals, Others' Emotion Appraisals, Regulation of Emotion, and Use of Emotion. Alpha coefficients for total score have been reported to be .86 overall with .86 for males and .87 for females (Shi & Wang, 2007).

**Stress.** The 10-item *Perceived Stress Scale* (PSS; Cohen, Kamarck, & Mermelstein, 1983) asks respondents about the frequency of specific stress related feelings and thoughts during the past month. Responses are made on a Likert scale ranging from 0 (never) to 4 (very often). Cohen and colleagues (1988) reported an alpha coefficient of .78.

**Anxiety.** The *Overall Anxiety Severity and Impairment Scale* (OASIS; Norman, Cissell, Means-Christensen, & Stein, 2006) is 5-item questionnaire (self-report) that measures the severity and impairment of anxiety (for clinical and nonclinical samples). Responses are recorded on a scale of 0–4. The OASIS developers reported a coefficient alpha of .80.

**Teacher efficacy.** The *Teacher's Sense of Efficacy Scale – Short Form* (TSES-SF; Tschannen-moran & Woolfolk Hoy, 2001) is a 12-item measure that assesses teacher competence and task demands in particular teaching contexts. The TSES yields scores on three dimensions of teacher efficacy (Instructional Strategies, Classroom Management, and Student

Engagement). Items are rated on a 9 point scale Likert scale ranging from “nothing” to “a great deal”. The scale has good internal consistency, with Cronbach alphas ranging from .90 for total score and from .81 to .86 for each subscale (Tschannen-Moran & Woolfolk Hoy, 2001).

**Satisfaction with life.** The *Satisfaction with Life Scale* (SWL; Diener, Emmons, Larsen, & Griffin, 1985) is a five-item measure that generates a global life-satisfaction score using a 7-point Likert scale (1 = Strongly disagree, 7 = Strongly agree). Cronbach’s alpha for this scale has been shown to be .87 (Diener et al., 1985).

**Resiliency.** The *Resiliency Scales for Children and Adolescents – Adult Version Revised* (RSCA-A-R; Saklofske et al., 2013) is a modified version of the Resiliency Scale for Children and Adolescents (RSCA; Prince- Embury, 2007), which has included eight additional items intended to characterize the appropriate developmental trajectory of adults (added to the Sense of Mastery scale). It assesses the core constructs found to underlie personal resiliency. The RSCA-A-R contains 72 items and three global scales, with 28 items for the Sense of Mastery scale, 24 items for the Sense of Relatedness scale, and 20 items for the Emotional Reactivity scale. Participants indicate their responses on a five-point Likert scale. Cronbach alpha coefficients are 0.91 (Sense of Mastery), 0.93 (Sense of Relatedness), and 0.91 (Emotional Reactivity; Saklofske et al., 2013).

## Results

### Descriptive Statistics, Internal Consistencies and Intercorrelations

Descriptive statistics for all the variables of the current study are presented in *Table 1*. The Coefficient alpha values for the variables used in the study ranged from .83 to .92. Alpha values for each variable are presented in *Table 2*.

Table 1

*Means (M) and standard deviations(SD) for treatment (N=23) and control groups (N=26)*

Variable	Group	Time 1		Time 2		Time 3		Sig.*
		M	SD	M	SD	M	SD	
TEIQue-SF	Treatment	146.39	27.97	154.73	26.69	158.35	27.38	F(2,44) = 2.94, $p = .063$
	Comparison	159.20	13.46	155.04	13.30			n.s.
WLEIS	Treatment	83.17	12.92	89.39	12.24	89.56	14.81	F(2,44) = 7.75, $p = .001$ , $\eta_p^2 = .26^{**}$
	Comparison	86.46	9.88	87.08	9.56			n.s.
SWLS	Treatment	26.43	5.29	27.57	5.09	28.00	5.28	F(2,44) = 1.99, $p = .15$
	Comparison	26.57	5.83	26.62	5.49			n.s.
PSS	Treatment	15.13	7.67	13.96	6.98	14.35	8.52	F(2,44) = .36, $p = .69$
	Comparison	15.23	6.46	15.04	6.12			n.s.
OASIS	Treatment	4.83	4.53	5.69	3.77	5.22	4.29	F(2,44) = .56, $p = .57$
	Comparison	4.77	3.00	4.70	3.11			n.s.
TSES	Treatment	84.09	14.09	91.26	13.33	86.61	15.48	F(2,44) = 4.15, $p = .022$
	Comparison	85.96	10.10	86.69	8.47			
RSCA (M)	Treatment	81.43	11.71	85.73	13.47	87.91	17.47	F(2,44) = 5.48, $p = .008$
	Comparison	80.08	12.93	81.23	11.00			n.s.
RSCA (ER)	Treatment	27.52	12.17	26.22	12.19	24.65	12.29	F(2,44) = 2.10, $p = .14$
	Comparison	24.46	9.11	24.20	9.12			n.s.
RSCA (SR)	Treatment	72.00	13.27	76.48	13.95	73.96	15.35	F(2,44) = 2.82, $p = .07$
	Comparison	75.81	7.88	74.89	9.77			n.s.

Note. TEIQue-SF: Trait Emotional Intelligence Questionnaire; WLEIS: Wong and Law Emotional Intelligence Questionnaire; SWLS: Satisfaction with Life; PSS: Perceived Stress Scale; OASIS: Overall Anxiety Severity and Impairment Scale; TSES: Teacher Sense of Efficacy Scale; RSCA: The Resiliency Scales for Children and Adolescents – Adult Version Revised; M: Mastery; ER: Emotion Regulation; SR: Sense of Relatedness

\* F-test results are for the one-way repeated measures ANOVA for the treatment group.

\*\* Significant < Sidak corrected  $\alpha = 1-(1 - .05)^{1/9} = .0057$

As can be seen from *Table 1*, the control group showed minimal and non-significant differences with only minor random changes over the two testing periods. Thus, the major statistical comparisons were only made for the EI treatment group, looking at changes observed across the three testing periods. For this treatment group, the results of the one factor repeated measures ANOVAs (using Sidak corrections for multiple comparisons) revealed that only the WLEIS demonstrated a statistically significant overall mean difference between the pre-test and post 1 and 2 scores over the course of the program. There were trends in the predicted directions for the TEIQue, teacher efficacy, and RSCA-A-R Mastery subscale, but the lack of statistical significance could be partially due to a reduction of power as a result of the small sample size.

Table 2

*Reliability coefficients*

Variable	Coefficient alpha
TEIQue-SF	.88
WLEIS	.90
SWLS	.87
PSS	.83
OASIS	.90
TSES	.90
RSYA (M)	.92
RSYA (ER)	.87
RSYA (SR)	.90

*Note.* Reliability estimates based on pre-test data.

Correlations among all of the variables used in the study are presented in *Table 3*. The correlations for both EI measures in relation to the other measures assessing stress, anxiety, efficacy, resiliency, and satisfaction with life are as expected in both magnitude and direction. However, the two EI measures showed only a moderate correlation of .60 suggesting that EI is to an extent, differently defined and assessed by each measure and that it is important, in further studies, to target the EI measures with the particular content of the program.



Table 3

*Intercorrelations among scales*

	TEIQue-SF	WLEIS	SWLS	PSS	OASIS	TSES	RSYA (M)	RSYA (ER)	RSYA (SR)
TEIQue-SF	1.00								
WLEIS	.60**	1.00							
SWLS	.45**	.41**	1.00						
PSS	-.56**	-.54**	-.38**	1.00					
OASIS	-.46**	-.56**	-.26	.75**	1.00				
TSES	.42**	.48**	.21	-.38**	-.39**	1.00			
RSYA (M)	.47**	.66**	.69**	-.44**	-.46**	.42**	1.00		
RSYA (ER)	-.60**	-.64**	-.43**	.43**	.48**	-.36*	-.47**	1.00	
RSYA (SR)	.57**	.58**	.48**	-.52**	-.54**	.32*	.58**	-.44**	1.00

*Note:* Correlations are based on pre-test data.

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

### Discussion

The present study examined some preliminary effects of an emotional intelligence program on a number of both positive and negative psychological variables in a sample of pre-service teachers. Given the non-significant and essentially unchanged score differences shown by the control group across testing periods, the results discussed here are in reference to the group who participated in the EI program across the three assessment periods. Results indicate that this group had higher self-report scores on both EI scales although only the WLEIS showed a significant increase following the program and over a one month period. These results are encouraging, as the Swinburne program does not directly map onto either the WLEIS or TEIQue, but rather is built around the broad foundations of EI including, awareness of emotions in oneself and others, reasoning with emotions, self-management and self control of emotions, and management of emotions in others.

While it would not be expected that major or even enduring changes in EI or any of the other measures would occur following five weekly program sessions, teacher efficacy and the mastery subscale of the resilience measure also show a trend toward increasing, following the completion of the program. Although these were students training to be teachers who had practicum opportunities but not regular classroom experience, the observation of small changes in self reported efficacy and increased sense of mastery again provides some support for

exploring further the introduction of EI skills training during the pre-service period. Previous research showing that EI is related to positive psychological factors and inversely correlated with stress, anxiety, and depression adds to the potential relevance of EI training for pre-service teachers.

### **Implications, Limitations, and Future Directions**

The lack of statistical significance may be partially due to a reduction of power given the small size of the sample. However, the results provide us with a starting point from which to begin to more effectively examine and potentially address teacher health, wellbeing, and, in turn, student and classroom outcomes. Emotional intelligence does appear to be responsive to training and the current Swinburne model provides a strong foundation on which to build a more elaborate and effective training program (Parker et al., 2009).

A refined program is currently being developed by the authors to more specifically and directly focus on EI and, as a result, more effectively target critical psychological health outcomes such as resilience and efficacy while enhancing coping and stress reduction strategies. Changes to the program organization are also being made in response to minor difficulties experienced with implementation (logistical) as well as by increasing interactional group activities and improving integration between EI skills. Future rounds of implementation will also include a program evaluation component of the specific elements of the program, in addition to outcome variable measurement. Secondary limitations of the current study include the lack of longer-term follow up in order to assess sustained or perhaps improved effects as time passes. This is important to note as the nature of EI is such that practice over time may improve the impact of these skills. Given that teachers are at high risk for burnout and ultimately for leaving the profession due to high stress levels during early teaching years, the next phase of our research program, employing the revised EI program with both pre-service and practicing teachers<sup>7</sup>, will hopefully add further support to the early findings presented here.

---

<sup>7</sup> Pre-service teachers only were involved in the study for this dissertation.

### References

- Austin, E. J., Saklofske, D. H., & Egan, V. (2005). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences, 38*, 547–558. <http://dx.doi.org/10.1016/j.paid.2004.05.009>.
- Austin, V., Shah, S., & Muncer, S. (2005). Teacher stress and coping strategies used to reduce stress. *Occupational Therapy International, 12*(2), 63–80.
- Boyatzis, R. E. (2007). Developing emotional intelligence competencies. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 28–52). New York, NY: Psychology Press/Taylor & Francis.
- Brackett, M. A., & Katulak, N. A. (2007). Emotional intelligence in the classroom: Skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 28–52). New York, NY: Psychology Press/Taylor & Francis.
- Brackett, M., & Katulak, N. A. (2006). Emotional intelligence in the classroom: skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 1–27). New York: Psychol. Press/Taylor & Francis.
- Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary school teachers. *Psychology in the Schools, 47*, 406–417.
- Brennan, K. (2006). The managed teacher: Emotional labour, education, and technology. *Educational Insights, 10*, 55–65.
- Chan, D. W. (2006). Emotional intelligence and components of burnout among Chinese secondary school teachers in Hong Kong. *Teaching and Teacher Education, 22*, 1042–1054.
- Chang, M. L. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review, 2*, 193–218.
- Cherniss, C., & Adler, M. (2000). *Promoting emotional intelligence in organizations: Make training in emotional intelligence effective*. Washington, DC: American Society of Training and Development.
- Ciarrochi, J., Blackledge, J., Bilich, L., & Bayliss, V. (2007). Improving emotional intelligence:

- A guide to mindfulness-based emotional intelligence training. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 89–124). New York, NY: Psychology Press/Taylor & Francis.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385–396. <http://dx.doi.org/10.2307/2136404>.
- Cohen, S., & Williamson, G. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The social psychology of health: Claremont symposium on applied social psychology*. Newbury Park, CA: Sage.
- Cooper, A., & Petrides, K. V. (2010). A psychometric analysis of the trait emotional intelligence questionnaire-short form (TEIQue-SF) using item response theory. *Journal of Personality Assessment, 92*, 449–457.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71–75.
- Gardner, L. (2005). *Emotional intelligence and occupational stress (Unpublished dissertation)*. Hawthorn, Australia: Swinburne University of Technology.
- Gardner, L. (2006). Emotional intelligence and occupational stress. In C. Stough, D. H. Saklofske, & K. Hansen (Eds.), *Emotional intelligence: International symposium* (pp. 169–195). Croydon, England: Tertiary Press.
- Hansen, K. (2010). *Emotional intelligence in the classroom*. Melbourne, Victoria, Australia: Swinburne University.
- Hansen, K., Gardner, L., & Stough, C. (2007). Improving occupational stress through emotional intelligence development. *Organizations and People, 14*, 70–75.
- Hargreaves, A. (1998). The emotional practice of teaching. *Teaching and Teacher Education, 14*, 835–854.
- Humphrey, N., Curran, A., Morris, E., Farrell, P., & Woods, K. (2007). Emotional intelligence and education: A critical review. *Educational Psychology, 2*, 235–254.
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. Review of *Educational Research, 79*, 491–525. <http://dx.doi.org/10.3102/0034654308325693>.
- Kokkinos, C. M. (2007). Job stressors, personality and burnout in primary school teachers. *British Journal of Educational Psychology, 77*, 229–243.

- Kornacki, S. A., & Caruso, D. R. (2007). A theory-based, practical approach to emotional intelligence training: Ten ways to increase emotional skills. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 53–88). New York, NY: Psychology Press/Taylor & Francis.
- Kyriacou (2001). Teacher stress: Directions for future research. *Educational Review*, 53(1), 27–35.
- Leschied, A. W., Flett, G. L., & Saklofske, D. H. (2013). Renewing a vision: The critical role of schools in a new mental health strategy. *Canadian Journal of School Psychology*, 28, 5–11.
- McIntyre, T., & Battle, J. (1998). The traits of good teachers as identified by African-American and white students with emotional and/or behavioral disorders. *Behavioral disorders*, 23, 134–142.
- Murphy, P. K., Delli, L. A. M., & Edwards, M. N. (2004). The good teacher and good teaching: Comparing beliefs of second-grade students, preservice teachers, and inservice teachers. *Journal of Experimental Education*, 72, 69–92.
- Nikolaou, I. (2002). Emotional intelligence in the workplace: Exploring its effects on occupational stress and organizational commitment. *International Journal of Organizational Analysis*, 10, 327–342.
- Norman, S. B., Cissell, S. H., Means-Christensen, A. J., & Stein, M. B. (2006). Development and validation of an Overall Anxiety Severity and Impairment Scale (OASIS). *Depression and Anxiety*, 23, 245–249. <http://dx.doi.org/10.1002/da.20182>.
- Palomera, R., Fernandez-Berrocal, P., & Brackett, M. (2008). Emotional intelligence as a basic competency in pre-service teacher training: Some evidence. *Electronic Journal of Research in Educational Psychology*, 15(6), 437–454.
- Parker, J. D. A., Hogan, M. J., Eastabrook, J. M., Oke, A., & Wood, L. M. (2006). Emotional intelligence and student retention: Predicting the successful transition from high school to university. *Personality and Individual Differences*, 41, 1329–1336.
- Parker, J. D. A., Saklofske, D. H., Wood, L. M., & Collin, T. (2009). The role of emotional intelligence in education. In C. Stough, D. H. Saklofske & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, research, and applications* (pp. 239–255). New York, NY: Springer. doi: [http://dx.doi.org/10.1007/978-0-387-88370-0\\_13](http://dx.doi.org/10.1007/978-0-387-88370-0_13).

- Pau, A. K., & Croucher, R. (2003). Emotional intelligence and perceived stress in dental undergraduates. *Journal of Dental Education, 67*, 1023–1028.
- Perry, C., & Ball, I. (2005). Emotional intelligence and teaching: Further validation evidence. *Issues in Educational Research, 15*, 175–192.
- Petrides, K. V. (2009). Technical manual for the trait emotional intelligence questionnaires (TEIQue). London: London Psychometric Laboratory.
- Poole, J., & Saklofske, D. H. (2009, June). *Increasing teacher efficacy and coping: An emotionally intelligent approach*. Paper presented at the Canadian Psychological Association Conference, Montreal, Canada.
- Prince-Embury, S. (2007). *Resiliency scales for children and adolescents: Profiles of personal strengths*. San Antonio, TX: Harcourt.
- Saklofske, D. H., Austin, E. J., Mastoras, S. M., Beaton, L., & Osborne, S. E. (2012). Relationships of personality, affect, emotional intelligence and coping with student stress and academic success: Different patterns of association for stress and success. *Learning and Individual Differences, 22*, 251–257.
- Saklofske, D. H., Nordstokke, D. W., Prince-Embury, S., Crumpler, T., Nugent, S., Vesely, A. K., et al. (2013). Assessing personal resiliency in young adults: The resiliency scale for children and adolescents. In S. Prince-Embury & D. H. Saklofske (Eds.), *Resilience in children, adolescents, and adults: Translating research into practice*. New York: Springer.
- Savage, H. W., Saklofske, D. H., & Mollard, D. (1988). *Teacher stress*. Regina: Saskatchewan School Trustees Association.
- Shi, J., & Wang, L. (2007). Validation of emotional intelligence scale in Chinese university students. *Personality and Individual Differences, 43*, 377–387.
- Slaski, M., & Cartwright, S. (2002). Health performance and emotional intelligence: An exploratory study of retail managers. *Stress and Health, 18*, 63–68. <http://dx.doi.org/10.1002/smi.926>.
- Slaski, M., & Cartwright, S. (2003). Emotional intelligence training and its implications for stress, health and performance. *Stress Health, 19*, 233–239.
- Stough, C., Saklofske, D. H., & Parker, J. D. A. (2009). A brief analysis of 20 years of emotional intelligence: An introduction to assessing emotional intelligence: Theory, research, and applications. In C. Stough, D. H. Saklofske & J. D. A. Parker (Eds.), *Assessing emotional*

*intelligence: Theory, research, and applications* (pp. 3–8). New York, NY: Springer.  
[http://dx.doi.org/10.1007/978-0-387-88370-0\\_1](http://dx.doi.org/10.1007/978-0-387-88370-0_1).

- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783–805.
- Vesely, A. V., Saklofske, D. H., & Leschied, A. D. W. (2013). Teachers—The vital resource: The contribution of emotional intelligence to teacher efficacy and well-being. *Canadian Journal of School Psychology*, 28, 71–89.
- Wong, C. S., Wong, P. M., & Law, K. S. (2007). Evidence on the practical utility of Wong's emotional intelligence scale in Hong Kong and Mainland China. *Asia Pacific Journal of Management*, 24, 43–60.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2009). Grace under pressure? Emotional intelligence, stress, and coping. In M. Zeidner, G. Matthews, & R. D. Roberts (Eds.), *What we know about emotional intelligence* (pp. 203–222). Cambridge: MIT Press.

## Chapter 5

### **The Present Study: Program Version Two – Phases Two and Three: Comprehensive Evaluation**

This chapter extends the above study by providing a comprehensive program evaluation, inclusive of a process evaluation component, of the revised Emotional Intelligence (EI) Program for teachers (Gardner, Stough, & Hansen, 2008; Vesely & Saklofske, 2013). Revisions to program versions are found in *Appendix C*. After introducing the study design, recruitment, participants, and program administration procedures, this chapter includes two sections: 5a focuses on the outcome evaluation, and 5b, the process evaluation. 5a provides an outline of the measures, analysis, results, and discussion that parallel the set-up of the above study. 5b includes the measures and analyses specific to the process assessment as well as a combined results and discussion section that allows for ease of understanding of the qualitative results. The study limitations are presented for both sections at the end of this chapter.

### **Methods**

#### **Study design**

This study involved the administration of an EI training program within a sample of pre-service teachers. As previously discussed, phases two and three follow standard program evaluation methodology with inclusion of a process evaluation, examining implementation and satisfaction measures, along with an outcome evaluation (e.g., Astbury & Leeuw, 2010; Friedman, 2001; Grembowski, 2001; Lipsy, 1993; Weiss, 1972). This chapter, both 5a and 5b, summarizes the analysis of data from phases two and three pooled together as reflected in *Figure 4*, using the above conceptual framework with the development of a program logic model detailing process, methods, and measures. The study follows a mixed-methods design, and the rationale falls under two of the purposes identified by Greene, Caracelli, and Graham (1989) for studies in program evaluation literature, namely: *complementarity* (i.e., “seek[ing] elaboration, enhancement, illustration, clarification of the results from one method with results from the other method”) and *expansion* (i.e., seek[ing] to expand the breadth and range of inquiry by using different methods for different inquiry components”; Greene et al., 1989, p. 259). This design involves both qualitative and quantitative data, the structure of which includes first, a process



evaluation using data only from the intervention group and a subsequent outcome evaluation using data from both treatment and control groups. Analyses are presented with the objectives of evaluating the impact of this EI program at both the program and teacher levels with the added component, in addition to assessing fidelity, of exploring the potential “how and why” by which program change may have occurred.

### **Recruitment and Group Assignment Procedure**

Congruent with phase one of this research, recruitment involved sending emails to instructors of the teacher education program at a Canadian University (Bachelor of Education Program), requesting to attend their classes to conduct brief, five-minute presentations introducing the study. After each presentation, a follow-up email with a link to the study was sent to the instructor, who posted this online for students to register with this program. Alternatively, students emailed the author and the link was sent to them directly. Individuals in the program group were offered token compensation of \$75 for completion of the program or a prorated amount if they attended less than five sessions, as well as a substantial nutritional snack that was provided during each session. The control group was offered a total of \$25 for completion of questionnaires at all four time-points. Once recruitment was complete, randomization into program and control groups was made. However, scheduling conflicts and other logistical challenges made this portion of the study’s design impractical. Group allocation occurred based on availability for workshop attendance, though participants were uninformed of this procedure and believed they were assigned to groups randomly. Individuals who participated in the control group in phase two were invited to participate in the intervention group for phase three. While a more ideal design, only three participants followed this trajectory. For these three individuals, six-month follow-up data was not used in the analysis. Participants from phases two and three came from the same cohort of students.

### **Total Participants**

Participants were 55 students enrolled full time in the teacher education program at a major urban faculty of education, 25.5% male and 74.5% female, ranging from 21 to 44 years of age ( $M = 25.5$  years;  $SD = 5.2$ ). 78.2% were Caucasian, 1.8% Aboriginal, 3.6% Indian, 1.8% African-American/Canadian, 9.1% Chinese, and 5.5% other. 34 of these individuals received the

EI training program and 21 served as control subjects. *Table 4* below indicates the complete number of participants at each time-point.

Table 4

*Number of Participants by Round of Data Collection (for Quantitative)*

	Time 1 Pre-Program	Time 2 Post-Program	Time 3 One-Month Follow-up	Time 4 Six-Month Follow-up
Round 2 PRGRM	10	10	8	7
Round 3 PRGRM	24	23	22	19
<b>TOTAL PRGRM</b>	<b>34</b>	<b>33</b>	<b>30</b>	<b>26</b>
Round 2 CNTRL	17	17	11	11
Round 3 CNTRL	4	3	2	2
<b>TOTAL CNTRL</b>	<b>21</b>	<b>20</b>	<b>13</b>	<b>13</b>

Note. Sample sizes changed by variable used; Number of participants for each set of analyses are noted individually in the results section.

**Phase 2 Participants.** The phase two sample at time 1 and time 2 representing pre- and post- program includes 10 individuals, 50% female between the ages of 22 and 35 years ( $M = 24.5$  years;  $SD = 4.1$ ) in the program group, with an attrition from 22 subjects at sign-up, and 17 individuals, 88.9% female ranging from 21 to 44 years of age ( $M = 26.6$ ;  $SD = 6.1$ ) in the control group. Participants decreased to 8 in the program group and 11 in the control group at time 3, which was at the one-month follow-up period, and to 7 in the program group and 11 in the control group at time 4 at the six-month follow-up period.

**Phase 3 Participants.** The phase three sample at time 1 and time 2, pre- and post-program, included 24 individuals, 75% female, with an age range of 21 to 42 years ( $M = 25.7$ ;  $SD = 5.3$ ) in the program group, an attrition from 31 subjects at sign-up, and 4 individuals, 75% female, ranging from 22 to 25 years ( $M = 23$ ;  $SD = 1.4$ ) in the control group. Participants decreased to 22 in the program group and 2 in the control group at time 3, the one-month follow-up period, and to 19 in the program group and 2 in the control group at time 4 at the six-month follow-up period. It is important to note that 3 individuals from the phase two control group indicated an interest in participating in the program component. For these individuals, their phase

two outcome data at time one served as their pre-program questionnaire after which they subsequently completed post-program, one- and six-month follow up questionnaires as described above.

### **Program Administration**

As noted above, the program group participated in five consecutive weeks of the EI program, each consisting of group sessions approximately two hours in length utilizing a workshop format that included lectures, group activities, discussion, and individual workbook exercises, followed by home assignments. *Tables 26 & 27 in Appendix A* summarize program components and session and content information. Sessions were run primarily by the author of this dissertation (Ashley Vesely, M.Sc.). However thesis supervisor Dr. Donald Saklofske (C. Psych) co-led some sessions. Administrators received the program from the original authors. Prior to administration, leaders studied the theoretical model and corresponded with program authors for particular administrative indications. At the point of program leadership, the author had between 3.5 and 5 years of clinical psychology practicum experience.

## **Chapter 5A: Outcome Evaluation**

### **Measures**

Eight measures relevant to the process evaluation were utilized and are listed and described below.

*Demographics questionnaire (DQ)*. Please see phase one (Vesely, Saklofske, & Nordstokke, 2013) for description.

*Emotional intelligence (EI)*. Two measures of EI were used. The GENOS was used here instead of the TEIQue-SF used in phase one because the former is a more detailed measure of the EI facets taught within the program. For the pilot study, phase one, the aim was to assess broadly the impact of EI training on general EI. The comprehensive program evaluation aims to assess this impact with more clarity and a focus on specific mechanisms, thus utilizing a more specific measure.

The *Genos Emotional Intelligence Inventory* (GENOS; Gignac, 2008) is a self-report measure of EI in the workplace. It is comprised of 70 items assessing the way an individual thinks, feels, and acts at work on the basis of emotional information. This test is the

corresponding measure to the theoretical model that was used. It was preceded by a 64-item measure, the Swinburne Emotional Intelligence Test (SUEIT; Palmer & Stough, 2001). Participants respond on a 5-point Likert-type scale and are instructed to indicate the extent to which each statement is true of the way they typically think, feel and act at work. Though the workplace SUEIT provided five factor scores of EI, this newer version follows a seven-factor structure and provides scores for seven facets in addition to a total EI score. Alpha coefficients for total score have shown to be .96 in the typical population, and ranging from .71 to .85 for the EI sub-scores (Gignac, 2008). The alpha coefficient for this sample, based on pre-test data, is .95.

The second EI measure used was the *Wong and Law Emotional Intelligence Test* (WLEIS; Wong, Wong, & Law, 2007). The alpha coefficient for this sample is .86 overall based on pre-test data. See phase one for description.

**Stress.** The *Perceived Stress Scale* (PSS; Cohen, Kamarck, & Mermelstein, 1983) was used – see phase one for description. This sample reports an alpha coefficient of .88.

**Coping.** The *Coping Inventory for Stressful Situations* (CISS; Endler & Parker, 1999) is a 48-item revised version of the original scale (Endler & Parker, 1999). Respondents indicate how much they engage in various activities during difficult, stressful, or upsetting situations on a 5-point scale, ranging from 1 (not at all) to 5 (very much). The alpha coefficients of the coping subscales were .76 for women and .84 for men in a sample of college students (Endler & Parker, 1999). The alpha co-efficients for this sample are .87, for task-oriented coping, .90 for emotion-oriented coping, and .74 for avoidance-oriented coping, based on pre-test data.

**Teacher efficacy.** The *Teacher's Sense of Efficacy Scale – Short Form* (TSES-SF; Tschannen-Moran & Woolfolk Hoy, 2001) was used. Phase one of the program provides a description. Internal consistency for this sample includes a Cronbach alpha of .87 based on pre-test data.

**Satisfaction with life.** The *Satisfaction with Life Scale* (SWL; Diener, Emmons, Larsen, & Griffin, 1985) was used. Phase one of the program provides a description. Cronbach's alpha for this sample is .84 based on pre-test data.

**Resiliency.** *Resiliency Scale for Young Adults* (RSYA; Prince-Embury, Saklofske, & Nordstokke, 2013- trial version). This scale is an attempt at updating the version used in phase one of this dissertation and has since been discarded. Cronbach's alpha for this sample is .85 based on pre-test data. However, due to a large number of participant response sets, this outcome variable was removed from the analysis though it was originally included in the assessment.

### **Completion of Outcome Measures**

Participants in the EI group completed the battery of online outcome measures at the start and end of the EI program, both pre and post-test, as well as at one- and six- month follow-up. The control group participated in the online outcome questionnaire portion of the study only, completing the same measures at four parallel time points to the program group.

### **Data Analysis**

The Statistical Package for the Social Sciences (SPSS) was used to generate the data for the outcome evaluation. Descriptive statistics and Pearson product moment correlations were run for pre-test data. Within and between group differences were be examined using mixed ANOVAs for time 1 and 2 data and repeated measures ANOVAs for the remaining time points 3 and 4, see below results section.

## **Results**

Mixed within-between subjects analyses of variance (ANOVAs) were conducted to compare scores on outcome variables between program and control groups across the first two time points (pre- and post-test). For these analyses, the program group was approximately  $N = 30$  and control group  $N = 20$ , though  $N$ 's varied across measurement periods and are noted separately for each variable. Using G\*Power with an alpha value of .05, the program group yields a power value of .92, though the control group brings the power value down to 0.72 for a repeated measures within-between interaction. Given that the control group showed minimal and non-significant differences with only minor random changes over the four testing periods as well as in acknowledgment of the already-low level of power, major statistical comparisons across the remaining time points were made using the program group only. This was done for each variable with the analyses run separately for both 3 and 4 time points (pre-, post-program, one-, and six-month follow-up). This was executed such that one could look at the results with higher sample

sizes at 3 time points as well as the pattern after 4 time points, despite the large rate of attrition at time 4. Further, given the small sample sizes, effect size may provide a more practical understanding of the meaning of the results, with benchmarks for interpretation based on empirical evidence from the specific research context (Hill, Bloom, Black, & Lipsey, 2008). A benchmark of a minimum 10% effect size was utilized in this study as a measure of practical significance in line with mean effect sizes from a meta-analysis of socioemotional interventions (Durlak et al., 2011). Means for each variable and for the EI facets separately, the latter at both 3 and 4 time points, can be seen in *Tables 5, 6, and 7* respectively and correlations in *Tables 8 and 9*.

Assumptions for analyses and changes to sample sizes are noted for each analyses run. As seen, a few of the assumptions are violated. Experts were consulted and the high likelihood of non-normality in a small sample size was noted. Given that there were no occurrences of extreme non-normality, the variables were not transformed on the assumption of robustness of the ANOVA to this assumption (Glass, Packham, & Sanders, 1972). Homogeneity of variance was not met once and is considered non-problematic unless there is a large sample size difference between groups (Glass et al., 1972). If homogeneity of variance or homogeneity of covariances were violated, epsilon multipliers (e.g., Greenhouse Geisser) were used to adjust degrees of freedom as suggested by a number of scholars (Gardner, & Tremblay, 2006; Kirk, 1995; Myers & Well, 1991). When sphericity was not met, the Greenhouse Geisser correction was always used. The following results are arranged by the objectives discussed in chapter 3.

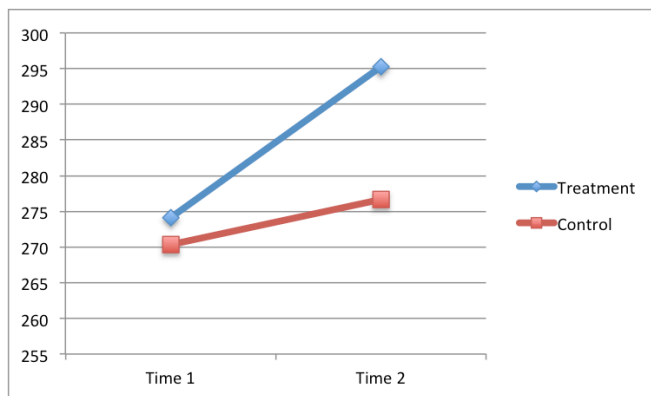
### **Objective 1: To Evaluate Emotional Intelligence across Time Points (Figure 2 Box 5)**

**GENOS EI.** Group differences between program and control groups were assessed at baseline (pre-program implementation) and shown to be non-significant for GENOS EI Total scores at time one,  $F(1, 52) = .521, p = .474$ . There were no outliers for either group at any time point, as assessed by inspection of studentized residuals within  $\pm 3$  standard deviations. EI was normally distributed for both groups at all time points as assessed by skewness and kurtosis, see *Table 30 (Appendix A)*, with the exception of time 1 and 2 control groups. However, when assessed by Shapiro-Wilk's test ( $p > .05$ ), all variables met the assumption of normality. There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ( $p >$

.05), however Box's test of equality of covariance matrices did not meet the assumption ( $p < .001$ ).

The mixed within-between subjects ANOVA conducted on the GENOS measure of EI indicated there was a significant effect of time on total EI,  $F(1, 51) = 6.612$ , ( $p = .013$ )  $p < .05$ , partial  $\eta^2 = .115$ , indicating that scores increased across time, as seen in *Table 5*. The interaction effect, however, was not significant  $F(1, 51) = 2.071$ ,  $p = .156$ , partial  $\eta^2 = .039$ . A visual depiction can be seen in *Figure 5*. It is important to note that the power here was indicated at .292 making non-significant results more likely.

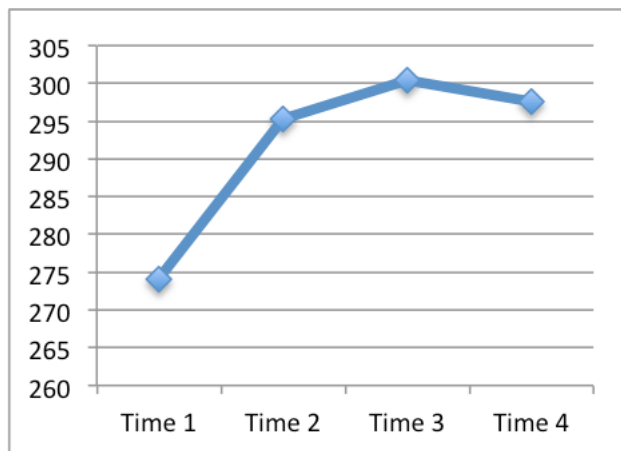
**Figure 5: GENOS EI Mean Score Changes Across Two Time Points**



As the control group showed no significant changes across any of the time points, a repeated measures ANOVA measured change in GENOS EI over the first three time points (pre-program, post-program, and one-month follow-up;  $N = 29$ ). Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated using,  $\chi^2(2) = 30.994$ ,  $p < .0005$ , and therefore, a Greenhouse-Geisser correction was used. The model was significant  $F(1.189, 33.280) = 12.014$ , partial  $\eta^2 = .300$ ,  $p = .001$  ( $p < .01$ ) with pairwise comparisons showing differences between time 1 and 2 to be significant with  $p = .012$  and between time 1 and 3 significant at  $p = .002$ . When the same test was run with 4 time points (*Figure 6*), pre-, and post-program, and one- and six-month follow-up ( $N = 24$ ; reduction of power to 0.8 from 0.9), there was also a significant effect of time on Total GENOS EI,  $F(1.680, 38.643) = 7.538$ , partial  $\eta^2 = .247$ ,  $p = .003$  ( $p < .01$ ). Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated using,  $\chi^2(5) = 29.715$ ,  $p < .0005$ , and therefore, a Greenhouse-Geisser correction was used. Pairwise comparisons showed significant differences in EI scores between

times 1 and 3 ( $p = .020$ ) as well as times 1 and 4 ( $p = .025$ ). EI scores between time 1 and 2 shows trends in the positive direction and approach significance.

**Figure 6: GENOS EI Mean Score Changes from Pre-Program to 6-month Follow-up**



A series of repeated measures ANOVAs were then conducted for each of the seven emotional intelligence subscales across both 3 ( $N = 29$ ) and 4 ( $N = 24$ ) time points. *Tables 6 and 7* present the means and standard deviations for both sets of analyses of each facet as well as the models, their significance values, and effect sizes. Overall, each facet of EI was shown to increase over time for both sets of analyses. Because Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated for each analysis, the Greenhouse-Geisser correction was used each time. Pairwise comparisons showed significant differences in EI scores at various time points, often depending upon the number of time points used. Emotional management of others showed no significance between any of the time points. When using 4 time points, emotional expression (EE), emotional reasoning (ER), emotional self-management (ESM), and emotional self-control (ESC) showed significant changes between times 1 and 3, and emotional awareness of others (EAO), EE, and ESM between times 1 and 4. When using 3 time points and the analysis had a higher sample size of 29, emotional self-awareness (ESA), EAO, EE, ER, and ESM show significant differences between both times 1 and 2 and times 1 and 3. ESC showed significant differences between time 1 and 3 only.

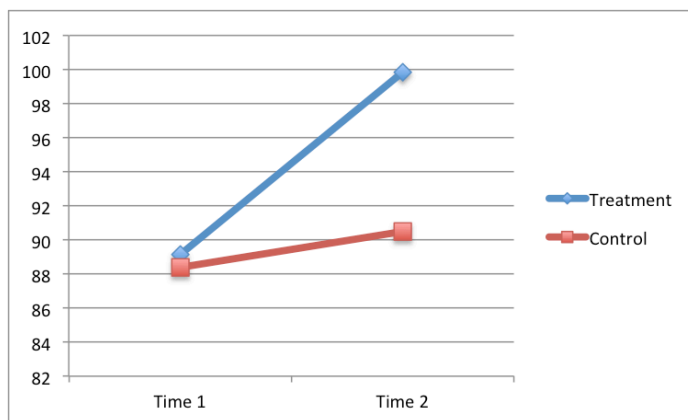
**WLEIS EI.** Group differences between program and control groups were assessed at baseline (pre-program implementation) and shown to be non-significant for differences in WLEIS total score  $F(1,46) = .109, p = .743$ . Three outliers were found upon assessment of studentized residuals within  $\pm 3$  standard deviations. Upon inspection, it was recognized that



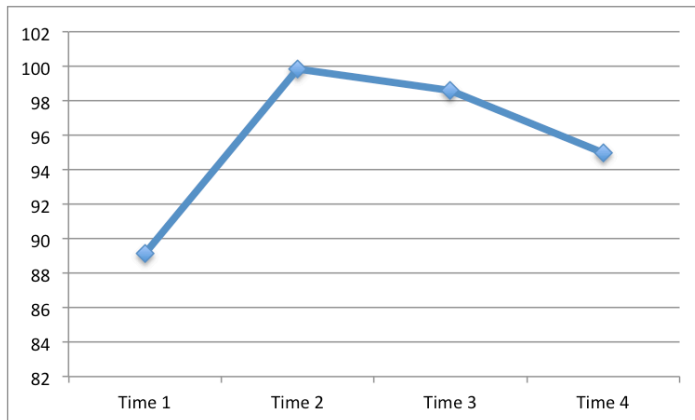
these individuals as well as three further participants completed the questionnaire using a response set. All six were deleted. There remained no outliers in the dataset used for this analysis. Times 3 and 4 for the program group and 1 and 2 for the control group violated the assumption of normality as seen in *Table 30 (Appendix A)*. There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ( $p > .05$ ) as well as homogeneity of covariance according to Box's test of equality of covariance ( $p = .021$ ;  $p < .001$ ).

The mixed within-between subjects ANOVA conducted on the WLEIS measure of EI ( $N_{\text{ecp}} = 29$ ;  $N_{\text{cntl}} = 18$ ) indicated there was a significant effect of time on total EI,  $F(1, 45) = 10.689$ , ( $p = .002$ )  $p < .01$ , partial  $\eta^2 = .192$ . The interaction between time and group was also significant  $F(1, 45) = 5.663$ ,  $p = .022$  ( $p < .05$ ), partial  $\eta^2 = .112$  (*Figure 7*).

**Figure 7: WLEIS Mean Score Changes Across Two Time Points**

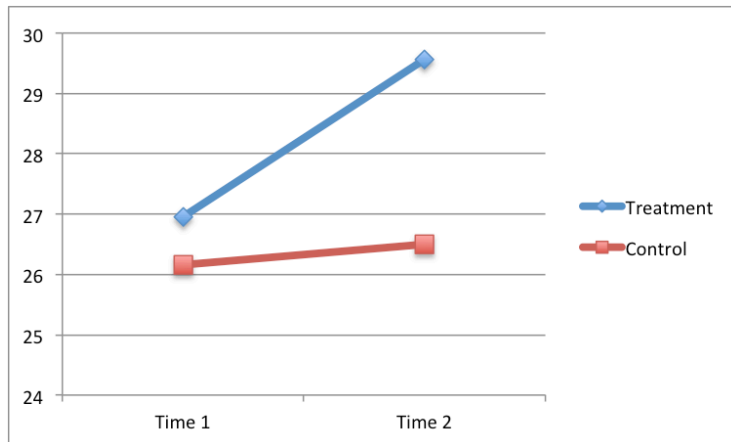


A repeated measures ANOVA measuring the WLEIS across the first 3 time points ( $N = 26$ ) indicated that the increase in the WLEIS Total EI score over time was significant,  $F(1.487, 37.181) = 14.170$ , partial  $\eta^2 = .362$ ,  $p < .0005$ , *Table 5*. Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated using,  $\chi^2(2) = 10.147$ ,  $p < .05$ , and therefore, a Greenhouse-Geisser correction was used. Pairwise comparisons using a Sidak correction showed significant differences in EI scores between times 1 and 2,  $p < .0005$ , and between times 1 and 3,  $p = .005$ . When adding the 4<sup>th</sup> time point into the analysis (*Figure 8*), a Greenhouse-Geisser correction was used due to sphericity violation,  $\chi^2(5) = 19.351$ ,  $p < .05$  and again EI showed significant increases over time  $F(2.243, 44.861) = 8.074$ , partial  $\eta^2 = .288$ ,  $p = .001$ . Pairwise comparisons showed significant differences in EI scores between times 1 and 2,  $p = .001$ , and between times 1 and 3,  $p = .017$ .

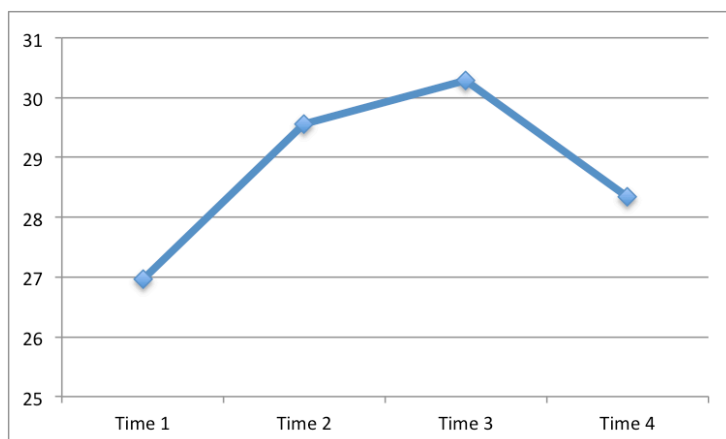
**Figure 8: WLEIS Mean Score Changes From Pre-Program to 6-Month Follow-up****Objective 2a: To Evaluate Program Impact on Satisfaction with Life (Figure 2 Box 6)**

Group differences at baseline were non-significant for Satisfaction with Life  $F(1,47) = .004, p = .947$ . Five outliers were removed due to answering with a response set. No further outliers were present after assessment of studentized residuals within  $\pm 3$  standard deviations. Program group times 2-4 and control group time 1 violated normality as seen in *Table 30 (Appendix A)*. Homogeneity of variances, as assessed by Levene's test of homogeneity of variance was also violated ( $p < .05$ ), though homogeneity of covariance according to Box's test of equality of covariance was present ( $p = .010; p < .001$ ).

The mixed within-between subjects ANOVA conducted on the satisfaction with life measure ( $N_{\text{exp}} = 29; N_{\text{ctrl}} = 19$ ) indicated that despite the trend in the right direction, neither the effect of time  $F(1,46) = 2.859, (p = .098)$ , partial  $\eta^2 = .059$  or the interaction of time and group  $F(1,46) = 2.614, p = .113$ , partial  $\eta^2 = .069$  showed significance, see *Figure 9*.

**Figure 9: Satisfaction with Life Mean Score Changes Across Two Time Points**

The repeated measures ANOVA measuring Satisfaction with Life (SWL) across three time points,  $N = 25$ , indicated a significant effect of time  $F(1.542, 37.017) = 6.092$ , partial  $\eta^2 = .202$ ,  $p = .009$ , indicating an increase in satisfaction with life across time, *Table 5*. Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated using,  $\chi^2(2) = 8.095$ ,  $p < .05$ , and therefore, a Greenhouse-Geisser correction was used. Pairwise comparisons using a Sidak adjustment, showed significant differences in SWL scores between times 1 and 3,  $p = .028$ ). If 4 time points were used, see *Figure 10*, a significant effect of time is also seen  $F(2.165, 41.134.307) = 3.618$ , partial  $\eta^2 = .160$ ,  $p = .033$ . Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated using,  $\chi^2(5) = 11.850$ ,  $p < .05$ , and therefore, a Greenhouse-Geisser correction was used. Pairwise comparisons using a Sidak adjustment, showed significant differences in SWL scores between times 1 and 2,  $p = .018$ .

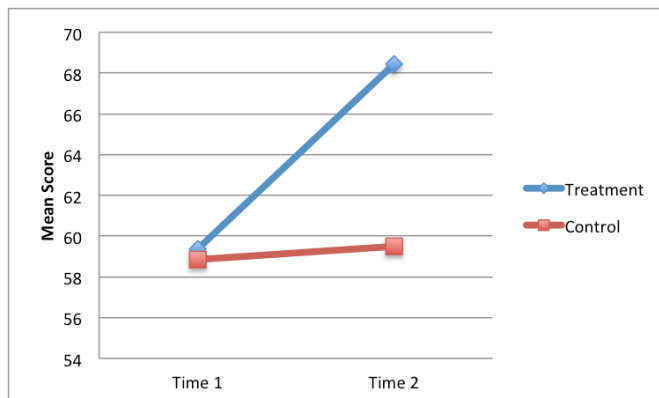
**Figure 10: Satisfaction with Life Mean Score Changes Pre-Program to 6-Month Follow-up**

### Objective 2b: To Evaluate Program Impact on Coping (Figure 2 Box 6)

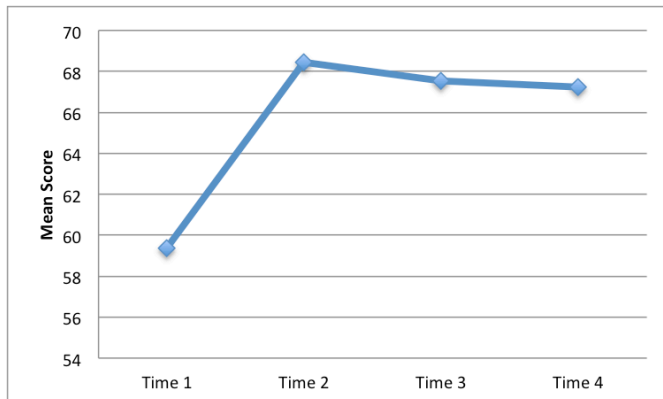
**Task-oriented Coping.** Group differences at baseline were non-significant for task-oriented coping  $F(1,51) = .274, p = .603$ . One outlier was identified as assessed studentized residuals within  $\pm 3$  standard deviations, however, it was not removed. All groups at each time point met the assumption of normality, as seen in *Table 30 (Appendix A)*. Homogeneity of variances, as assessed by Levene's test of homogeneity of variance was met ( $p < .05$ ), as well as homogeneity of covariance according to Box's test of equality of covariance was present ( $p = .065; p < .001$ ).

The mixed within-between subjects ANOVA conducted on task-oriented coping total ( $N_{\text{ecp}} = 31; N_{\text{cntl}} = 20$ ) indicated there was a significant effect of time  $F(1,49) = 9.918, (p = .003)$ , partial  $\eta^2 = .168$  as well as interaction between time and group  $F(1,49) = 7.795, p = .007 (p < .05)$ , partial eta squared = .137, see *Figure 11*.

**Figure 11: Task Oriented Coping Mean Score Changes Across Two time Points**



A repeated measures ANOVA measuring task-oriented coping across the three time points indicated a significant increase over time,  $F(2,52) = 17.035$ , partial  $\eta^2 = .396, (p < .0005)$ , *Table 5*. Mauchly's Test of Sphericity indicated that the assumption of sphericity had been violated using,  $\chi^2(2) = 7.364, p < .05$ , and therefore, a Greenhouse-Geisser correction was used. Pairwise comparisons showed significant differences in task-oriented coping scores between times 1 and 2, ( $p < .0005$ ), as well as times 1 and 3,  $p = .001$ . When run with 4 times points ( $N = 22$ ; *Figure 12*), time was also significant  $F(3,63) = 11.220, p < .0005$ , partial  $\eta^2 = .348$ . Significant differences were seen between time one and each of times 2,  $p < .0005$ , 3,  $p = .004$ , and 4,  $p = .003$ .

**Figure 12: Task-Oriented Coping Mean Changes Pre-Program to 6-Month Follow-up**

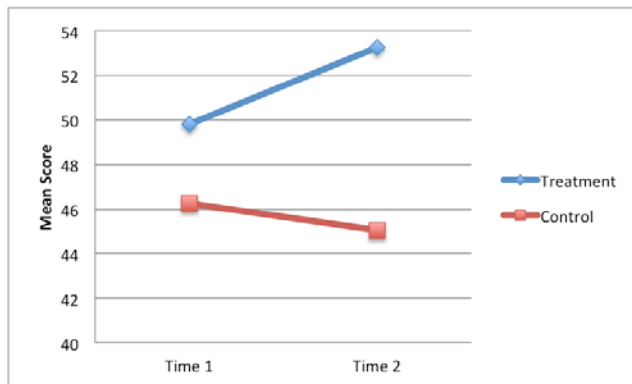
**Emotion-oriented Coping.** Group differences at baseline were non-significant for emotion-oriented coping  $F(1,51) = .452, p = .504$ . No outliers were identified as assessed by looking at studentized residuals within  $\pm 3$  standard deviations. All groups at each time point met the assumption of normality, except for slight deviations for the program group at time 3 and times 1 and 2 of the control group, as seen in *Table 30 (Appendix A)*. Homogeneity of variances, as assessed by Levene's test of homogeneity of variance was met ( $p < .05$ ), as well as homogeneity of covariance according to Box's test of equality of covariance was present ( $p = .762$ ).

The mixed within-between subjects ANOVA conducted on emotion-oriented coping total ( $N_{\text{ecp}} = 32; N_{\text{ctl}} = 20$ ) indicated there was no significant effect of time  $F(1,50) = .760, (p = .387)$ , partial  $\eta^2 = .015$  or interaction between time and group  $F(1,50) = .049, p = .825$ , partial  $\eta^2 = .001$ . A repeated measures ANOVA measuring emotion-oriented coping across the three time points,  $N = 28$ , also showed no significant increase over time,  $F(2,54) = 1.484$ , partial  $\eta^2 = .052, p = .236$ , *Table 5*.

**Avoidance-oriented Coping.** Group differences at baseline were non-significant for avoidance-oriented coping  $F(1,52) = 1.286, p = .262$ . No outliers were identified as assessed by studentized residuals within  $\pm 3$  standard deviations. All groups at each time point met the assumption of normality, as assessed by skewness and kurtosis, as seen in *Table 30 (Appendix A)*. Homogeneity of variances, as assessed by Levene's test of homogeneity of variance was met ( $p < .05$ ), as well as homogeneity of covariance according to Box's test of equality of covariance was present ( $p = .519; p < .001$ ).

The mixed within-between subjects ANOVA conducted on avoidance-oriented coping total ( $N_{\text{exp}} = 33$ ;  $N_{\text{ctrl}} = 20$ ) indicated that though scores did not change over time  $F(1,51) = .126$ , ( $p = .724$ ), partial  $\eta^2 = .002$ , the interaction between time and group  $F(1,51) = 5.143$ ,  $p = .028$ , partial  $\eta^2 = .092$ , was significant. The trend is visually depicted in *Figure 13*.

**Figure 13: Avoidance-oriented Coping Mean Score Changes Across Two Time Points**



When measured using a repeated measures ANOVA measuring avoidance-oriented coping across the three time points ( $N = 29$ ), a significant increase over time,  $F(2,56) = 1.570$ , partial  $\eta^2 = .053$ , ( $p = .217$ ) was not found. (Looking at trends in *Table 5*, one can see patterns that oppose each other for means between program and control groups).

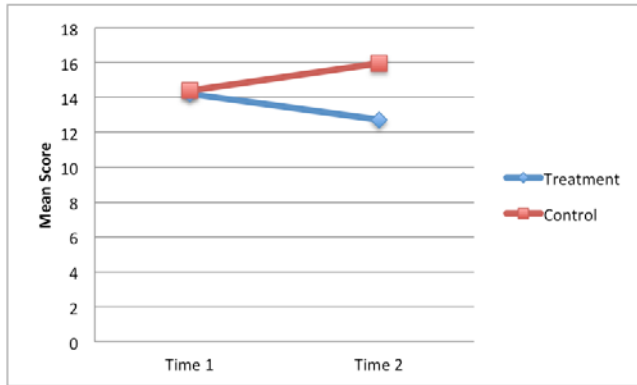
### **Objective 2c: To Evaluate Program Impact on Stress (Figure 2 Box 6)**

Group differences at baseline were non-significant for stress  $F(1,52) = .006$ ,  $p = .937$ . One outlier was identified as assessed studentized residuals within  $\pm 3$  standard deviations, however, justification to remove it was not found. Stress was normally distributed for both groups at all time points as assessed by skewness and kurtosis, see *Table 30 (Appendix A)*, with the exception of time 1 and 2 control groups. However, when assessed by Shapiro-Wilk's test ( $p > .05$ ), all variables met the assumption of normality. Homogeneity of variances, as assessed by Levene's test of homogeneity of variance was met ( $p < .05$ ), as well as homogeneity of covariance according to Box's test of equality of covariance was present ( $p = .031$ ;  $p < .001$ ).

The mixed within-between subjects ANOVA conducted on the stress variable ( $N_{\text{exp}} = 33$ ;  $N_{\text{ctrl}} = 20$ ) indicated there was no significant effect of time  $F(1,51) = .029$ ,  $p = .865$ , partial  $\eta^2 = .001$  or interaction between time and group  $F(1,51) = 1.984$ ,  $p = .165$ , partial eta squared = .037.

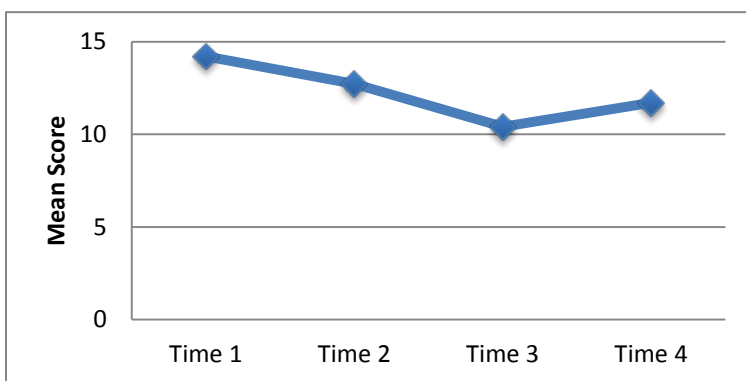
Trends, seen in *Table 5* and *Figure 14* show that the means decrease for the program group and increase for the program group (see discussion).

**Figure 14: Stress Mean Score Changes Across Two Time Points**



A repeated measures ANOVA measuring stress across three time points ( $N = 29$ ) indicated a significant effect of time on stress  $F(2,56) = 4.255$ , partial  $\eta^2 = .132$ ,  $p = .019$  with pairwise comparisons showing the differences between time 1 and 3 to be significant at  $p = .034$ . When the same analysis was run with four time points ( $N = 24$ ), there was no significant effect of time on stress,  $F(3,69) = 1.362$ , partial eta  $\eta^2 = .056$ ,  $p = .262$ . However, as seen in *Table 5* and *Figure 15*, the numbers show a trend toward decreasing with the exception of 6-month follow-up.

**Figure 15: Stress Mean Score Changes From Pre-Program to 6-month Follow-up**



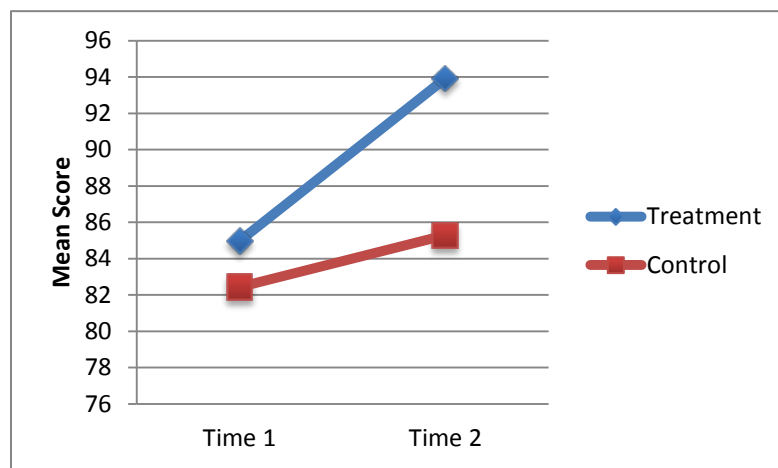
**Objective 2d: To Evaluate Program Impact on Teacher Efficacy (Figure 2 Box 6)**

Group differences for teacher efficacy at baseline were non-significant  $F(1,52) = 1.571$ ,  $p = .216$  indicating the groups to be equivalent pre-program administration. Assumptions were

assessed for each analysis. There were no outliers for this variable, as assessed by inspection of studentized residuals within  $\pm 3$  standard deviations. Teacher efficacy was normally distributed for both groups at all time points as assessed by skewness and kurtosis, see *Table 30 (Appendix A)*, with the exception of time 3 and 4 program groups. There was homogeneity of variances, as assessed by Levene's test of homogeneity of variance ( $p > .05$ ) as well as homogeneity of covariances, as assessed by Box's test of equality of covariance matrices ( $p = .049$ ;  $p > .001$ ).

The mixed within-between subjects ANOVA conducted on the teacher efficacy variable ( $N_{\text{ecp}} = 33$ ;  $N_{\text{cntl}} = 21$ ) indicated that teacher efficacy significantly increased over time  $F(1,52) = 17.309$ ,  $p < .0005$ , partial  $\eta^2 = .250$ . The interaction between time and group was also significant  $F(1,52) = 4.192$ ,  $p = .046$ , partial  $\eta^2 = .075$ , see *Figure 16*.

**Figure 16: Teacher Efficacy Mean Score Changes Across Two Time Points**



A repeated measures ANOVA measuring teacher efficacy across the first 3 time points ( $N = 30$ ) indicated there was a significant effect of time  $F(2,58) = 8.423$ , partial  $\eta^2 = .225$ ,  $p = .001$ , *Table 5*. Pairwise comparisons show significant differences between times 1 and 2 ( $p = .001$ ) and between times 1 and 3 ( $p = .024$ ). The repeated measures ANOVA using 4 time points (*Figure 17*;  $N = 25$ ) did indicate a significant effect of time on teacher efficacy,  $F(3,72) = 5.851$ , partial  $\eta^2 = .196$ ,  $p = .001$ . Pairwise comparisons show significant differences between times 1 and 2 ( $p = .002$ ) and between times 1 and 4 ( $p = .032$ ), with differences between times 1 and 3 approaching significance ( $p = .067$ ).



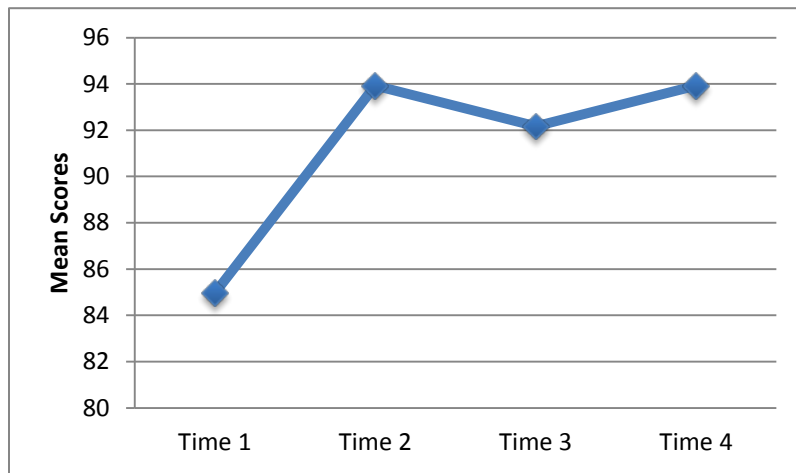
**Figure 17: Teacher Efficacy Mean Changes from Pre-Program to 6-Month Follow-up**

Table 5: Means (M) and Standard Deviations (SD) for Program (N = 26-30) and Control Groups (N = 9-21)

Variable	Group	Time 1		Time 2		Time 3		Time 4		Sig. (Program Group for 3-time point ANOVA)
		M	SD	M	SD	M	SD	M	SD	
<b>EI (GENOS) (N = 29)</b>	Program	274.14	28.36	295.24	25.05	300.45	28.84	297.50	30.85	F(1.189, 33.280) = 12.014, p = .001*, $\eta^2 = .300$
	Control	270.30	24.95	276.67	28.79	266.00	29.29	279.00	40.84	
<b>EI (WLEIS) (N = 26)</b>	Program	89.15	10.85	99.85	7.02	98.58	8.61	95.00	11.76	F(1.487, 37.181) = 14.170, p < .0005*, $\eta^2 = .362$
	Control	88.39	8.45	90.47	12.19	87.64	8.59	93.00	10.42	
<b>Life Satisfaction (N = 25)</b>	Program	26.96	5.26	29.56	3.42	30.28	3.89	28.35	5.66	F(1.542, 37.017) = 6.092, p = .009*, $\eta^2 = .202$
	Control	26.16	6.04	26.50	7.18	25.17	7.09	26.33	4.77	
<b>Stress (N = 29)</b>	Program	14.21	6.48	12.72	7.32	10.41	7.52	11.71	7.21	F(2,56) = 4.255, p = .019*, $\eta^2 = .132$
	Control	14.40	4.71	15.95	9.37	14.08	7.48	14.00	9.11	
<b>Coping (TASK) (N = 27)</b>	Program	59.37	10.24	68.44	8.29	67.56	8.75	67.23	10.49	F(2,52) = 17.035, p < .0005*, $\eta^2 = .396$
	Control	58.85	6.80	59.52	7.63	60.85	9.36	58.64	14.79	
<b>Coping (EMOT) (N = 28)</b>	Program	39.21	11.04	37.50	14.55	34.75	13.83	35.30	11.79	F(2,54) = 1.484, p = .236, $\eta^2 = .052$
	Control	40.80	9.87	39.05	13.53	40.46	11.45	39.64	12.03	
<b>Coping (AVOID) (N = 29)</b>	Program	49.79	9.65	53.24	12.01	51.62	12.41	49.29	11.03	F(2,56) = 1.570, p = .217, $\eta^2 = .053$
	Control	46.25	7.33	45.05	10.50	45.08	8.59	41.55	13.53	
<b>Teacher Efficacy (N = 30)</b>	Program	84.97	9.39	93.93	9.89	92.17	12.61	93.92	12.00	F(2,58) = 8.423, p = .001*, $\eta^2 = .225$
	Control	82.43	8.82	85.29	10.65	85.23	10.39	91.36	11.91	

*Note.* GENOS: Genos Emotional Intelligence Scale; WLEIS: Wong and Law Emotional Intelligence Scale; \* indicates significance  $\alpha < .05$ ; Sidak correction done for pairwise comparisons; Ms and SDs for the program groups at times 1-3 correspond to the sample sizes written in the variable column. The F and p values are presented from the 3-time point analysis with this corresponding sample size. The remaining Ms and SDs (from Time 4 and for all time points of the control group) are calculated using the highest number of participants possible that have data (program T4 - N = ~24; control all Ts - N = between 9-13 [T3,4] and 20 [T1.2]).

Table 6

*EI Subscale Means (M) and Standard Deviations (SD) for Program groups (N =29)*

EI Facet	Group	Time 1		Time 2		Time 3		Significance & Effect Sizes (3 time Points – pre-, post- program, and one-month)
		M	SD	M	SD	M	SD	
<b>ESA</b>	Program Control	41.55	4.56	44.34	3.93	44.58	4.36	F(1.44,40.39) = 8.23, p = .003*, $\eta^2 = .227$
<b>EAO</b>	Program Control	40.00	4.44	43.48	4.70	43.79	5.10	F(1.42,39.75) = 8.99, p = .002*, $\eta^2 = .243$
<b>EE</b>	Program Control	38.93	5.04	42.00	4.56	42.90	4.67	F(1.15,32.21) = 9.61, p = .003*, $\eta^2 = .256$
<b>ER</b>	Program Control	39.31	4.57	42.41	4.08	43.07	4.51	F(1.46,40.83) = 10.98, p = .001*, $\eta^2 = .282$
<b>ESM</b>	Program Control	36.48	4.33	39.72	3.88	41.03	4.76	F(1.36,38.10) = 12.50, p < .0005*, $\eta^2 = .309$
<b>EMO</b>	Program Control	40.45	4.82	42.90	3.80	43.17	4.62	F(1.48,41.36) = 4.95, p = .020, $\eta^2 = .150$
<b>ESC</b>	Program Control	37.41	4.41	40.38	5.48	41.90	5.57	F(1.48,41.52) = 10.56, p = .001*, $\eta^2 = .274$

Note. ESA: emotional self-awareness; EAO : emotional awareness of others; EE: emotional expression; ER: emotional reasoning; ESM: emotional self-management; EMO: emotional management of others; ESC: emotional self-control; Same note as *Table 5* above for sample size of control group. \* indicates significance  $\alpha < .05$  for pairwise comparisons with a Sidak correction.

Table 7

*EI Subscale Means (M) and Standard Deviations (SD) for Program (N =24) and Control (N = mixed) groups*

EI Facet	Group	Time 1		Time 2		Time 3		Time 4		Significance & Effect Sizes (For all 4 time Points)
		M	SD	M	SD	M	SD	M	SD	
<b>ESA</b>	Program	41.79	4.47	44.38	3.83	44.63	4.27	44.13	4.87	F(2.28,52.45) = 4.22, p = .016, $\eta^2 = .155$
	Control	40.55	4.29	41.71	4.43	39.77	4.55	40.82	5.67	
<b>EAO</b>	Program	40.38	4.49	43.13	4.61	43.54	4.89	44.17	5.22	F(1.94,44.62) = 5.64, p = .007*, $\eta^2 = .197$
	Control	39.85	4.07	40.67	4.84	38.69	3.71	43.00	5.31	
<b>EE</b>	Program	39.13	5.24	42.21	4.31	43.25	4.41	43.38	4.39	F(1.53,35.16) = 8.02, p = .003*, $\eta^2 = .259$
	Control	38.45	4.57	39.24	4.37	36.92	4.97	38.36	6.07	
<b>ER</b>	Program	39.25	4.43	42.42	4.20	43.00	4.47	42.04	5.71	F(2.21,50.86) = 6.12, p = .003*, $\eta^2 = .210$
	Control	39.45	3.59	39.81	4.08	38.46	4.39	40.45	5.28	
<b>ESM</b>	Program	36.67	4.55	39.79	3.59	40.83	4.57	40.92	5.64	F(2.15,49.52) = 6.72, p = .002*, $\eta^2 = .226$
	Control	35.60	5.17	37.00	5.66	36.15	6.66	37.00	7.58	
<b>EMO</b>	Program	40.17	4.93	42.71	3.41	43.33	4.08	42.88	5.20	F(1.91,43.96) = 4.06, p = .026, $\eta^2 = .150$
	Control	39.35	4.17	39.71	4.19	38.69	4.75	40.27	6.50	
<b>ESC</b>	Program	37.71	4.54	40.46	5.06	41.46	5.21	40.00	4.55	F(2.07,47.56) = 5.12, p = .009*, $\eta^2 = .182$
	Control	37.05	4.11	38.52	5.04	37.31	6.03	39.09	7.13	

Note. ESA: emotional self-awareness; EAO : emotional awareness of others; EE: emotional expression; ER: emotional reasoning; ESM: emotional self-management; EMO: emotional management of others; ESC: emotional self-control; Same note as *Table 4* above for sample size of control group; \* indicates significance  $\alpha < .05$  for pairwise comparisons with a Sidak correction.

Table 8

*Correlations of all variables at Time 1 (Pre-Program)*

	<b>EI (GENOS)</b>	<b>EI (WLEIS)</b>	<b>Life Satisfaction</b>	<b>Task Coping</b>	<b>Emotion Coping</b>	<b>Avoidance Coping</b>	<b>Stress</b>	<b>Teacher Efficacy</b>
<b>Emotional Intelligence (GENOS)</b>	1							
<b>Emotional Intelligence (WLEIS)</b>	.789**	1						
<b>Life Satisfaction</b>	.365**	.254	1					
<b>Task Coping</b>	.498**	.706**	.209	1				
<b>Emotion Coping</b>	-.391**	-.293*	-.285*	-.051	1			
<b>Avoidance Coping</b>	.086	.226	-.090	.214	.281*	1		
<b>Stress</b>	-.211	-.231	-.481**	-.150	.559**	.241	1	
<b>Teacher Efficacy</b>	.372**	.274*	.194	.244	-.011	-.067	.110	1

Note. GENOS: Genos Emotional Intelligence Scale; WLEIS: Wong and Law Emotional Intelligence Scale

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

Table 9

*Correlations of GENOS EI Facets at Time 1 (Pre-Program)*

	<b>Total EI</b>	<b>ESA</b>	<b>EAO</b>	<b>EE</b>	<b>ER</b>	<b>ESM</b>	<b>EMO</b>	<b>ESC</b>
<b>Total EI</b>	1							
<b>ESA</b>	.842**	1						
<b>EAO</b>	.896**	.774**	1					
<b>EE</b>	.891**	.836**	.765**	1				
<b>ER</b>	.795**	.609**	.727**	.618**	1			
<b>ESM</b>	.814**	.576**	.614**	.700**	.462**	1		
<b>EMO</b>	.875**	.579**	.789**	.683**	.765**	.705**	1	
<b>ESC</b>	.864**	.658**	.705**	.705**	.612**	.770**	.715**	1

Note. ESA: emotional self-awareness; EAO : emotional awareness of others; EE: emotional expression; ER: emotional reasoning; ESM: emotional self-management; EMO: emotional management of others; ESC: emotional self-control

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

## Discussion

### Interpretation of Objective 1 Results – Emotional Intelligence Across Time

The primary results discussed here, as well as for all variables, refer to the program group, given the non-significant and unchanged score differences shown by the control group across all time points. Results indicated that pre-service teachers who participated in the EI program showed higher self-report scores on both EI scales upon program completion, as well as at the one-month and six-month follow-up periods. Analysis with the highest power using three time points showed significance between pre- and post-program scores as well as those at the one-month follow up on both scales. Significant scores for the WLEIS remained when adding the fourth time point to the analysis, except for the six-month time point, which dropped off slightly. Scores on the GENOS scale remained significantly different from baseline at one- and six-month follow-up only.

All but one of the individual EI facets that were taught throughout the program showed a significant increase over time. The lack of increase in ‘emotional management of others’ is not surprising given the data from the qualitative analysis (see chapter 5b below). The consistency in the increase of the other facets, despite differences in change at different time points, provides further support for their positive correlations, and addresses the concept that some of the skills may be dependent upon one another. This will be discussed further in the general discussion.

When comparing effect sizes of the EI facets, emotional self-awareness (ESA) had the smallest effect size of those facets that were significant (still  $\eta^2 = .227$ ). This was despite the fact that ESA was one of the facets most focused on in the program. This could be because of the phenomenon in which individuals who have a dearth of skills in a certain area also lack the capacity to assess their strengths and weaknesses in that area (Ehrlinger, Johnson, Banner, Dunning, & Kruger, 2008). In this case, those individuals who were low on ESA would not have been aware enough to rate themselves as such. As a result of the program, these individuals who initially rated themselves highly, gain insight and become more self-critical while still noting their improvement as the program progresses. However, at later assessment points their scores may not have changed much given their bias at the beginning. The notion that improving facets like emotional management and self-control might produce more observable outcomes, such as

reduced rumination or a decrease in expressed anger, could also contribute to the explanation of bigger effect sizes of these facets over ESA.

Despite the small sample size, an analysis compared the control group between pre- and post-program time points. This analysis revealed higher scores at the second time point on both measures, though it was only significant for the WLEIS. This non-significant finding might be expected due to the lower power of a small sample size, however, this was only the case for one of the measures. These results are promising especially given that GENOS EI continued to increase after time two. This outcome could be attributed to the notion that practice is one of the primary mechanisms through which knowledge is converted into behavioral application, a finding that is elaborated on in the general discussion. These results provide further evidence that EI can be increased through EI training (Karahana & Yalcin, 2009; Kotsou et al., 2011; Nelis et al. 2009; 2011 Sharif et al., 2013; Slaski & Cartwright, 2003; Vesely, et al., 2014; Yalcin, et al., 2008) and encourage evaluators to delve further into the details regarding these programs. In comparison to the results from *Chapter 4* (Vesely et al., 2014), this *Chapter (5)* offers a replication that the program can improve workplace EI (WLEIS) and implies that, in contrast to the TEIQue, the GENOS measure that maps more closely onto EI skills taught, may better capture the outcomes of learning that take place during the program.

### **Interpretation of Objective 2 Results – Psychological Wellbeing Variables Across Time**

The results from pre-service teachers who participated in the program revealed significant changes in life satisfaction, task-oriented coping, stress, and teacher efficacy between the pre-program and one-month follow-up periods. This finding is congruent with previous research indicating that higher EI has an impact on variables associated with psychological wellbeing as well as teacher-specific outcomes, and further, EI training can positively impact positive outcomes in other areas (Brackett et al., 2010; 2011; Gardner, 2005; Gardner, Stough, & Hansen, 2008; Parker et al., 2006; Poole & Saklofske, 2009; Slaski & Cartwright, 2003).

A closer examination of teacher efficacy revealed significant increases between time one and post-program, one-month, and six-month follow-up. It can be argued that this is a logical outcome given participants were, at the time, students in a teacher education program where the emphasis is on the daily acquisition of new skills with regard to pedagogy. However, despite the small sample size, the difference between program and control groups for teacher efficacy was



significant, indicating that individuals in the program group had an advantage over those whose participation was limited to regular classroom work.

Coping, one of the important variables that has shown to help reduce teacher stress and improve psychological wellbeing also showed results that parallels the literature in relation to higher EI (Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012; Stough, et al., 2009). Endler and Parker's (1990; 1999) categorization of coping has shown differences in how adaptive each type of coping may be, with task-oriented coping being considered the most efficacious, as it is associated with being active and productive when being challenged with difficult situations. It is also correlated with patterns such as being problem-focused and emphasizing the positive (Endler & Parker 1990). Task-oriented coping in participants from the program group increased significantly between time one and all remaining time points. Further, task oriented coping also showed a significant increase compared to the control group despite the low power due to small sample size. An increase in task-oriented coping fits well with the skills learned throughout the program, especially those that were goal-oriented and encouraged a focus on problem-solving. Neither emotion-oriented coping nor avoidance-oriented coping showed significant changes over time. Though both task-oriented and emotion-focused coping have shown themselves to be proactive and associated with better adjustment than avoidance-oriented coping, emotion-focused coping has also been associated with depression, anxiety, and neuroticism (Barnett, & Gotlib 1988; Dusenburg, & Albee, 1988; Endler, & Parker, 1990) and might be considered effective only for particular situations such as in anticipation of emotionally-laden events (Kariv, & Heiman, 2005). Avoidance-oriented coping is associated with a lack of an attempt to make change and has been linked to social diversion, distraction, and poorer adjustment in the long-run (Endler, & Parker, 1994). However, avoidance strategies have shown some support as a short-term benefit (Linehan, 1999; 2014). The significant difference in avoidance-oriented coping between program and control groups at the post-program period could be explained by the participants' attempt to benefit from distraction as a temporary means of avoiding "making the situation worse" in a tense moment, something that was taught in the module on emotional self-control.

Significant changes were reflected in reported stress between the pre-program and one-month follow up period in the program group. Though statistical significance was not reached in the analysis comparing program and control groups, a trend of decreasing values can be seen for

the program group, whereas there was a trend toward increased stress in the control group. As the samples are too small to conduct a statistical analysis at time points three and four, it is plausible to entertain the notion that individuals who completed the program may have experienced even higher stress levels had they not completed the program; it could be implied that their stress levels did not greatly decrease by post-program as they were in the process of acquiring new skills, and various studies emphasize the need for practice in order for skills to become effective and behavior change to occur (Howells et al., 2005; Huppert & Johnson, 2010).

It would therefore appear to be relevant to re-introduce the importance of practice as it applies to the acquisition of new skills. This is a concept that is reinforced by the results of other stress-reducing programs that teach similar skills. For example, a decrease in stress resulting from interventions involving self-awareness skills such as mindfulness, has been more frequently demonstrated in programs spanning 8 weeks or more (e.g., Mindfulness-Based Stress Reduction: Shapiro, Astin, Bishop, & Cordova, 2005). This suggests that there may be an “incubation period” in which skills must be processed and applied before resulting in optimal levels of effectiveness. Similar to the trend seen in GENOS EI and satisfaction with life indices, outcome impact continues to increase post-program and at one-month follow up. The general discussion will link this hypothesis to the patterns in the process evaluation below. However, results here may suggest that as skills improved, pre-service teachers were able to manage stress despite the increased workload of school and new teaching practicum experiences. Individuals who did not receive the program, however, may have been less prepared to manage these new stressors and they indicated a higher level of stress as time passed, a finding commonly reported in student populations as the semester progresses (Estabrook, & Christianson, 2013).

Finally, satisfaction with life also showed a significant increase over time with the program group. Though this is a broad-based measure, it is an indication of improved wellbeing and thus relevant when discussing the psychological health of teachers. The integration of these results will be discussed further in the general discussion before which the process evaluation will be examined.

## Chapter 5b: Process Evaluation

### Measures

Eight measures were used to assess process in this program evaluation. Measures are categorized according to the stages of EI skill acquisition that were being assessed. Each stage refers to a box within the causal model that appears in *Figure 2*, and thus evaluates one or more of the evaluation's objectives. Boxes one through four are assessed in the process evaluation: fidelity of program implementation (box 1), participation (box 2), understanding (box 3), and application of skills (box 4), in addition to satisfaction of participants. *Table 10* provides an overview of the different measures and what they assess prior to their explanations below.

Table 10

*Measures Used in Process Evaluation & Which Components Each Measures*

Measures	Component of Causal Model Being Assessed				
	Fidelity	Participation	Understanding	Application	Satisfaction
<i>Session Videotape</i>	X				
<i>Attendance</i>		X			
<i>Homework worksheets</i>		X	X	X	
<i>Goal Setting</i>		X		X	
<i>Reflection Paragraphs</i>		X	X	X	
<i>Practice Logs</i>		X		X	
<i>Session Feedback Questionnaires</i>			X	X	X
<i>Final Feedback Questionnaires</i>			X	X	X

Note. X specifies that the indicated measure was used in the assessment of the listed component.

### **Fidelity of Implementation (Figure 2 Box 1).**

*Session Videotape.* Sessions were videotaped and reviewed to confirm the inclusion of each component. A fidelity checklist was created to ensure that leaders of the workshops presented on all necessary components of the program each time the material was taught. As each topic was covered, items were checked off a content list written prior to program administration.

### **Participation (Figure 2 Box 2).**

**Attendance.** Individuals signed an attendance sheet upon entering the program classroom each week. Only individuals who attended four or five out of five sessions were included in the analysis.

**Homework worksheets and Reflection Paragraphs.** The original program did not utilize any instruments to assess the participant's homework. Thus, two means of measuring homework were devised. 1) A separate worksheet was designed to assess weekly homework completion that was rated yes/no, as well as a rating of the participant's level of effort involved assessed on a 5-point Likert scale from 1 - *no effort* to 5 - *I gave it my all*. Worksheets also included a question regarding homework comments, if applicable, and provided space for reflection in which each participant was encouraged to openly reflect on the homework and the skills learned that week as they were applied in their daily routine. This could be completed in any format. A separate homework sheet was collected each week (see *Appendix B*). Additionally, specific homework exercise worksheets that were assigned each week from the workbook were collected at the beginning of each session. Reflection paragraphs and worksheets were coded differently depending on whether they were used to assess participation, understanding, or application of EI skills. For the assessment of participation, homework and reflections were merely assessed for completion.

**Goal Setting.** Asking participants to set goals each week was another method of increasing participant involvement and creating a means to assess their participation in EI skills practice. Individuals were asked to choose an activity or specific skill from the session to work on at home and to indicate this on the given worksheet prior to leaving the EI session. This could be to practice a specific skill a certain number of times, for example mindfulness practice, or to make a change to a certain pattern of behaviour related to one of the skills such as organizing mornings differently so that stress is reduced. The "SMART" criteria, namely, "specific, measurable, achievable, realistic, and time-bound," (Doran, 1981) was used to delegate how to set goals. For the purposes of participation, goals were recorded for completion as yes/no.

**Practice logs.** In order to record the content of, and extent to which skills were practiced outside of the session, a log (see *Appendix B*) was developed such that participants could record incidents of skill practice each week. Individuals were asked to indicate the amount of time

practiced, the specific skills/activities practiced, and to rate each practice session for “level of mastery” on a five point Likert scale. In order to measure participation, logs were then coded for general completion, total amount of time practiced both per week and overall, and assessed for each of the above categories.

**Understanding (Figure 2 Box 3).** It should be noted that individual’s understanding of content is a difficult component to measure without explicit “test-taking.” However an attempt to assess this was made in a variety of ways.

*Homework sheets* and *Reflection Paragraphs* summarized above, were also assessed for understanding by coding specific content for themes and categorization of information according to EI-related skills. The coding criteria were generated using narrative analysis, summarized in a following section. Some specific coding criteria were generated based upon the theoretical model of the Swinburne EI theory (Palmer & Stough, 2001).

*Session Feedback Questionnaires.* Given that the original EI program did not include measures of feedback post-session, feedback questionnaires consisting of 8 items were generated based upon those used in a previous empirical process evaluation (Vingilis et al., 2011) and focused on general and program-specific learning objectives. Responses to simple questions regarding what participants had learned were phrased with ‘personal’ wording, such as, “What was the most *significant* thing you learned from today’s session?” Other questions generated responses using a standardized 5-point Likert reflecting 1 = *not at all* and 5 = *very much* scale on topics such as familiarity, usefulness, and application of the information. A sample item, “I can see how the information taught today can be applied to situations I have encountered, or will encounter in the future.” The questions regarding learning were utilized to analyze participant understanding.

*Final Feedback Questionnaires.* A 17-item feedback questionnaire was generated for this study based upon the same empirical process evaluation noted above (Vingilis et al., 2011). In addition to being centered on learning objectives, this questionnaire also included general and content-based inquiries regarding participant satisfaction. Items involved questions on usefulness of content, use of skills, intention for further practice of skills, and general satisfaction with individual learning and the program itself. These were assessed on 5- or 6-point Likert scales with a variety of response options such as, “Which topic was most useful to you?” with six

response options listing different content areas. Questions relevant to content understanding were used to assess this domain.

**Application of Skills (Figure 2 Box 4).** Similar to the assessment of content comprehension, evaluating the individuals' realistic skill application presents many challenges. It was attempted by utilizing the following:

*Homework sheets* and *Practice Logs* were also used to assess the application of skills. Specific worksheets that were relevant to application were chosen. Numerous worksheets asked participants to identify events that occurred in their daily lives and discuss how they applied their EI skills to these situations. These were assessed for the specific application of EI skills. Different coding criteria for efficacy were used. Similar to coding for 'understanding,' content was analyzed for themes and categorization of information according to EI-related skills. Practice logs were then analyzed in more detail for variety, frequency, level of mastery, length of total practice time, and consistency.

*Goal-setting.* Setting goals and following through each week was also used as a representation of skill application. Goals were assessed for content to ensure EI skill involvement.

*Session and Final Feedback Questionnaires.* A number of the relevant questions from both session and final feedback questionnaires were also used to identify EI application.

### **Participant Satisfaction.**

*Session and Final Feedback Questionnaires.* The Wisconsin model of program evaluation indicates the necessity of measuring both implementation as well as satisfaction (e.g., Delbecq & Van de Ven, 1971). Hence, both session and final feedback questionnaires included a number of items asking about general satisfaction with the program inclusive of their likes/dislikes, recommendations, and preferences of topic, and use of certain learning formats.

### **Completion of Process Measures**

The program group process measures were submitted to the evaluators during program sessions. *Practice logs, homework, goal, and reflection sheets* were submitted at the beginning of sessions 2-5. *Session feedback forms* were submitted at the end of each of the five sessions and the *final feedback form* was submitted on the last day of the program. Documents were

connected using participant identification (ID) numbers. Each individual was assigned an ID such that his or her work remained anonymous and in order to avoid responses stemming from social desirability. Participants in the program groups used this same number for the online questionnaires and for anything that was submitted to the evaluators in session. Completion of worksheets and feedback forms were requested but voluntary.

### **Data Analysis and Interpretation**

Categories of measurement were based on the causal, *Figure 2*, and logic, *Figure 1*, models that focused on the question, “Did it happen?” for the fidelity of implementation, participation in activities, understanding skills, and application of skills. Participant satisfaction was also analyzed. Given the chronological nature of the program and taking into consideration that the levels of causality are theorized to unfold over time, narrative analysis was used in order to track the impact of stages of the program (see Creswell, Hanson, Clark, & Morales, 2007 for a review). Specifically, the process analysis followed a similar structure to that which is commonly used for program evaluation studies (e.g., Vingilis et al., 2011), namely using narrative analysis to analyze any open-ended, qualitative questions present in each category, as well as to examine a selection of the content of other documents that were submitted, such as homework sheets, practice logs, and reflections. Open-ended extensions to some of the Likert-scale questions were also analyzed in this way. This means of analysis allowed for a broad perspective of general themes without requiring emphasis on the common themes, such as through a holistic-content perspective (Lieblich, Tuval-Mashiach, & Zilber, 1998). However, in order to provide more detailed understanding of consensus for program purposes, frequencies were often included to outline the convergence of agreement between participants on certain common elements.

Analysis began with verbatim transcripts of each participant response on the above-noted measures. Documents that were chosen for analysis were those, which best established whether each of the boxes in the causal model happened, such as whether participants applied their skills. When themes were generated, two independent individuals did so separately, the author and a research assistant, who then came together to formalize these categories within a coding template. Some categories, such as those used to assess content understanding or level of correct application of specific EI skills/facets, were based upon specific criteria used in EI assessments (Palmer & Stough, 2001). For example, reflections were coded for facets of EI in order to

indicate which skill was applied each week. All data were coded separately, at which point two coders came together to assess for correspondence, which is noted for each analysis through inter-rater reliability. SPSS was used to analyze the quantitative data and descriptive statistics were used to analyze both session and final feedback questionnaires that involved Likert-based questions.

### Results and Discussion

Examination of each objective including the fidelity of implementation, participation in activities, understanding of material, application of skills, and participant satisfaction were assessed through the closed and open ended questions from homework sheets, practice logs, reflections, goal setting worksheets, session and final feedback forms. Measures of process at every stage of the causal model contributed to the available information aiding the evaluator to further understand the mechanisms of EI development and its possible pathways to relevant outcomes. Results are outlined according to the evaluation objectives and specified by flow from the causal model as summarized in *Figure 2*, after which participant satisfaction is outlined. This formative evaluation demonstrated that the objectives of the program were implemented and that general participant satisfaction could be determined.

#### Objective 3: To evaluate Fidelity of Implementation (Figure 2 Box 1)

*Table 11* summarizes a fidelity checklist, which documents the specific content that was covered in each of the five EI sessions. By reviewing the videotape, each item was checked against the corresponding Power Point presentation that covered each content area, thus ensuring each component was implemented.

Table 11

#### *Fidelity of Content Presentation*

Session Number	Content Covered by Component	Round 2	Round 3
<b>1</b> <b>October 9 2013</b> <b>&amp;</b> <b>January 22 2014</b>	<i>Psychoeducation</i>		
	Overview of Occupational Stress	<b>X</b>	<b>X</b>
	Linking EI skills to stress in general	<b>X</b>	<b>X</b>
	<i>Education and Demonstration of Skills</i>		
	Teach general skills to deal with stress	<b>X</b>	<b>X</b>



	Teach approach to stress management	<b>X</b>	<b>X</b>
	Teach skills to regain balance	<b>X</b>	<b>X</b>
	<i>Homework/Reflection Assignment</i>		
	Explain and assign homework that encourages practice	<b>X</b>	<b>X</b>
<b>2</b>			
<b>October 16 2013 &amp; January 29 2014</b>	<i>Psychoeducation</i>		
	How EI skills can help reduce stress	<b>X</b>	<b>N/A</b>
	Overview of individual EI skills	<b>X</b>	<b>N/A</b>
	<i>Education and Demonstration of Skills</i>		
	Examples of how EI can be developed via EI skills	<b>X</b>	<b>N/A</b>
	How to set up a feedback mechanism	<b>X</b>	<b>N/A</b>
	<i>Group Activities</i>		
	Discussions and games surrounding EI's link to stress	<b>X</b>	<b>N/A</b>
	<i>Homework/Reflection Assignment</i>		
	Explain and assign homework that encourages practice	<b>X</b>	<b>N/A</b>
<b>3</b>			
<b>October 23 2013 &amp; February 5 2014</b>	<i>Psychoeducation</i>		
	Explaining Emotional Self-awareness (ESA)	<b>X</b>	<b>X</b>
	Explaining Emotional Expression (EE)	<b>X</b>	<b>X</b>
	<i>Education and Demonstration of Skills</i>		
	Demonstration, discussion, and group activities regarding ESA skills	<b>X</b>	<b>X</b>
	Discussion and scenarios regarding EE skills	<b>X</b>	<b>X</b>
	<i>Homework/Reflection Assignment</i>		
	Explain and assign homework that encourages practice	<b>X</b>	<b>X</b>
<b>4</b>			
<b>October 30 2013 &amp; February 12 2014</b>	<i>Psychoeducation</i>		
	Explaining Emotional Awareness of Others (EAO)	<b>X</b>	<b>X</b>
	Explaining Emotional Reasoning (ER)	<b>X</b>	<b>X</b>
	Explaining Emotional Self-Management (ESM)	<b>X</b>	<b>X</b>
	Explaining Emotional Management of Others (EMO)	<b>X</b>	<b>X</b>
	<i>Education and Demonstration of Skills</i>		

	Discussing perception and practicing ESA skills	X	X
	Discussion and activities regarding ER skills	X	X
	Demonstrating and discussing ESM skills	X	X
	Demonstrating EMO skills through activities	X	X
	<i>Homework/Reflection</i>		
	Explain and assign homework that encourages practice	X	X
<b>5</b> <b>November 6 2013</b> <b>&amp;</b> <b>February 19 2014</b>	<i>Psychoeducation</i>		
	Explaining Emotional Self-Control (ESC)	X	X
	Review of each individual EI skill	X	X
	<i>Education and Demonstration of Skills</i>		
	Discussion and scenarios around ESC	X	X
	Group Discussion of each EI skill	X	X

Note. X indicates completion of content coverage; N/A is written where the session recording was unavailable due to technological malfunction. This means that the information could not be double-checked, however, the content was checked during the session and again with the tape – the former revealed that all content was, indeed, covered.

### Interpretation of Objective 3 Results – Fidelity of Implementation

The first step involved the examination of the fidelity of implementation. This involved an appraisal of content coverage by reviewing videotapes of every workshop session in addition to having a research assistant checking PowerPoint slides during the live sessions. This protocol confirmed that the required content was indeed included in the workshops. This confirmation allowed for the investigation of the next levels of program theory.

#### Objective 4a: To Evaluate Participation (Figure 2 Box 2)

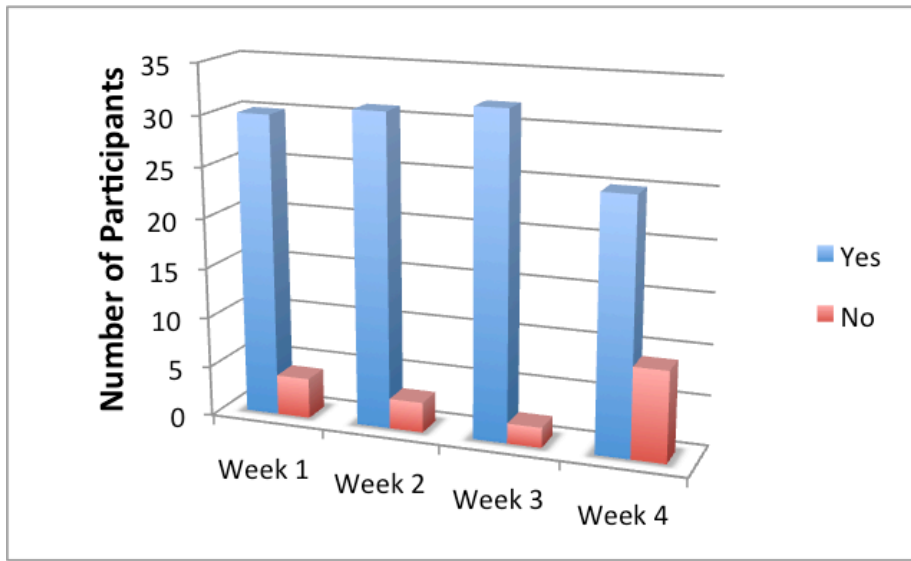
*Note:* Much of the data for this section refers only to weeks one through four as no homework (to be returned) was assigned for week five.

**Attendance.** Only individuals who attended at least four of the five EI sessions were included in the analysis. Of 34 individuals, 29 (85.3 %) attended all of the sessions. 5 (14.7%) individuals missed either half of one or one session.

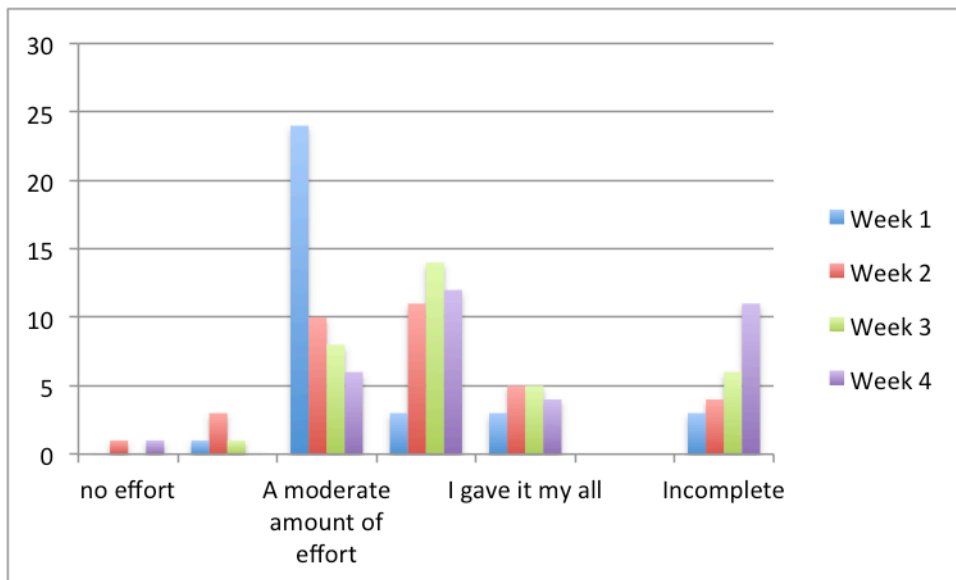
**Homework worksheets.** Individuals were considered to have completed their homework if they handed in completed worksheets for the week. Between 73.5% and 94.1% completed their homework through weeks 1 and 4. The number of participants who completed their homework versus those who did not is summarized in *Figure 18*. Of those who completed their

homework each week, not all indicated their effort level. However, an overview of those who did is summarized in *Figure 19*. Of these participants, only one individual reported having put in no effort on weeks one and three. Effort levels were either at or above “a moderate level of effort” for 96.8%, week 1, 86.7 %, week 2, 96.4%, week 3, and 95.7%, week 4.

**Figure 18: Homework Completion by Week**



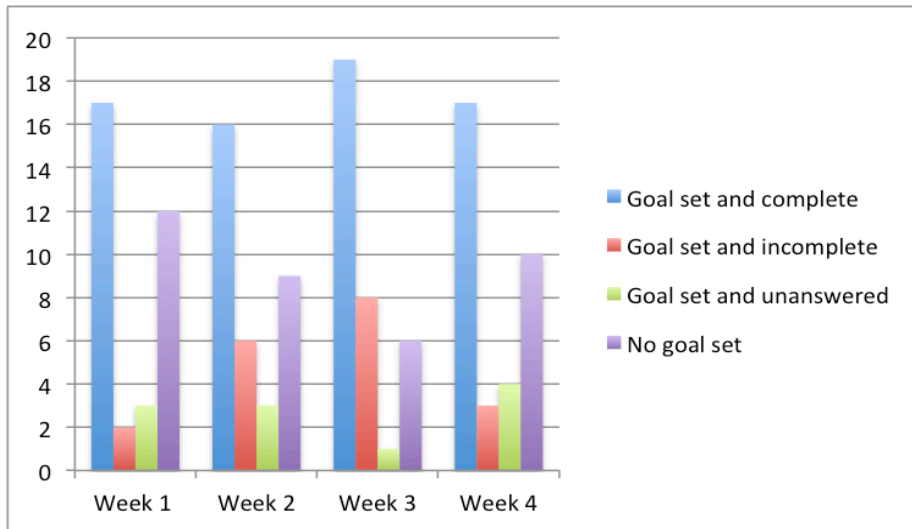
**Figure 19: Weekly Effort Level of Homework Completion**



**Goal Setting.** Participation was also measured by looking at whether participants set and/or completed their weekly goals. By week, 64.7 %, week 1, 73.5%, week 2, 82.4%, week 3,

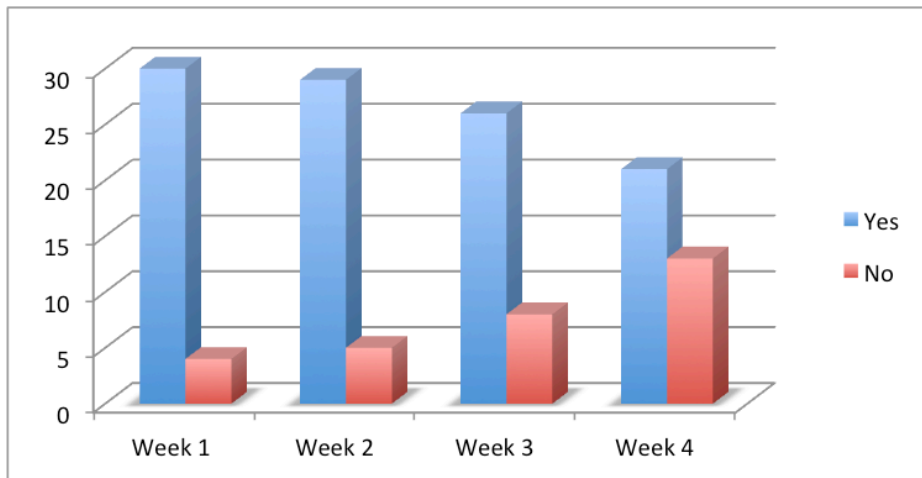
and 70.6%, week 4 of participants at least *set* a goal. For those who definitively noted completion of this goal were the following: 50%, week 1, 47.1%, week 2, 55.9%, week 3, and 50%, week 4. *Figure 20* depicts this visually. If nothing was handed in or the paper was blank, participants were considered as not having set a goal.

**Figure 20: Weekly Goal Completion**



**Reflection Paragraphs.** Completion of reflection paragraphs fluctuated throughout the sessions, with the lowest being a 61.8% completion rate, week 4 and the highest a rate of 88.2%, week 2. Reflection paragraph completion can be seen in *Figure 21*.

**Figure 21: Reflection Completion by Week**



**Practice Logs.** Participation in the practice of skills by completion appears in *Figure 22*, where between 67.6%, week 4, and 88.2%, week 3 of participants engaged in some form of skills practice. The number of times practiced, total time practiced, as well as number of skills practiced are summarized in *Table 12*. Noteworthy, activities varied and individual measures may not be representative of the extent of the practice, for example: time they spent doing mindful breathing exercises versus time spent doing yoga.

**Figure 22: Practice Completion by Week**

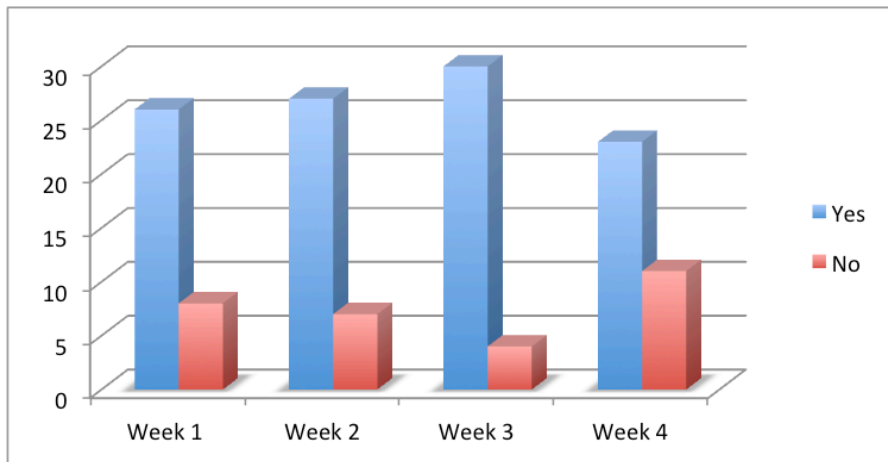


Table 12

*Practice Log Participation*

	<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>
<b>Number of Skills Practiced</b>				
<i>N (those who practiced)</i>	26	26	30	23
Range	3	3	4	5
Minimum	1	1	1	1
Maximum	4	4	5	6
Mean	2.46	2.11	2.33	2.17
Std. Deviation	0.99	1.07	1.21	1.23
<b>Number of Times Practiced</b>				
<i>N (data available)</i>	26	25	30	23
Range	15	24	16	13
Minimum	1	1	2	3
Maximum	16	25	18	16
Mean	5.23	5.28	6.5	6.43
Std. Deviation	3.78	4.76	4.31	3.46
<b>Amount of Time Practiced (minutes)</b>				
<i>N (data available)</i>	24	23	28	23
Range	156	173	324	271.8
Minimum	4	2	6	0.2
Maximum	160	175	330	272
Mean	40.58	34.24	73.04	54.7
Std. Deviation	39.35	42.46	91	61.46

**Interpretation of Objective 4a Results - To Evaluate Participation**

Logically, participation in the program's components is the foundation for eventual expected outcomes. In order to ensure that participant attendance could act as a base form of participation, individual data was only analyzed if participants attended four or more of the five sessions offered. This means that all participants discussed here were in-class and were engaged at least in psychoeducation and in-class activities (e.g., filling out worksheets, discussions). The causal model recognizes that every participant may not have utilized all seven skills outside of the classroom, however, all seven EI skills were covered in the in-class workshop.

The other measures that were utilized assessed the attempts to: process information, actively listen during sessions, as well as determine the level of participant effort. The completion of homework, goals, reflections, and practice logs revealed that the majority of individuals participated in workshop components, with slight variations between weeks and

activities. The results indicated that all homework-related activities either increased or remained the same between weeks 1 and 3 with some decreasing slightly for the last week. The lowest completion rate for homework remained at almost three-quarters of the participants, occurring in the final week of the program. On a weekly basis, no less than 71% of the participants set goals (despite not following through), with no less than 68% completing their practice logs. Even for the optional reflection paragraphs, there was a minimum 62% completion rate. Since the self-reported effort levels were above the mid-point for almost all those who responded, and even increased for some as time passed, it is suggested that those who were committed to the program may have increased their effort whereas those who were not as committed exhibited lower effort levels. This statement is made with some reservation as these numbers do not indicate correspondence between completion percent and effort. It is also important to note that “non-completers” were often different by week and no participant completed less than two weeks worth of hand-in material.

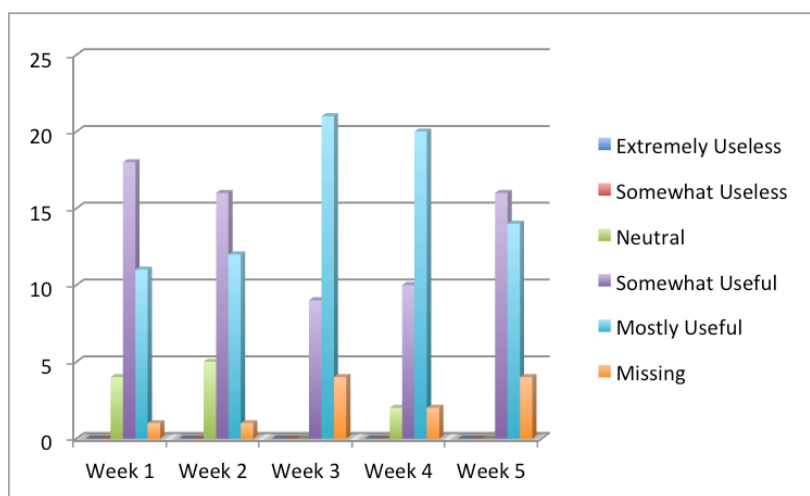
Despite the knowledge that, theoretically, participation in each component of education and skills acquisition is needed in order for change to occur, the amount of participation required in order to gain the maximum educational benefit that the program offers remains unknown. The literature regarding the relationship between rates of learning and skills acquisition remains largely equivocal (Rosenbaum, Carlson, & Gilmore, 2001 for a review) as does the literature on related theories of behavior change (e.g., Hardeman et al., 2000). It is recognized however, that this fact may vary by participant as well. It is plausible that for some psychoeducational programs that include a practice component, practice may be sufficient to achieve improved outcomes. For others however, such as with those who may not have previously engaged in as much introspection, more in-depth self-reflection and homework completion may be necessary. Given the number of activities to be completed and the finding that individuals still completed, at minimum, two or more week’s worth of activities, it could be inferred there was active engagement with the material by the majority of participants. Following from this, the amount of required participation may be dependent upon the level of understanding of the material. Given that active engagement and completion do not necessarily imply comprehension, this was the next aspect of program implementation that helps the evaluator to determine whether improvements in EI were being made.

### Objective 4b: To Evaluate Content Understanding (Figure 2 Box 3)

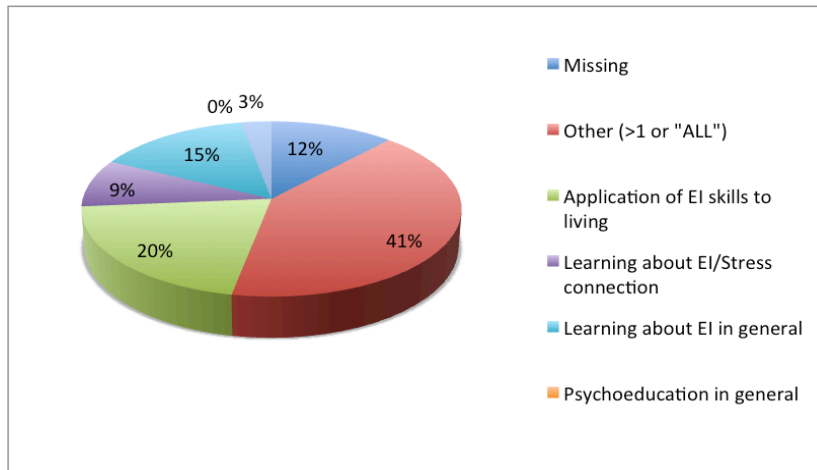
Though all EI skills were covered throughout the sessions via psychoeducation, in general, participants were given a choice as to which skill they wanted to work on outside the sessions. As a result, each participant may not have worked on all seven skills. This decreased the amount of data collected that represented the full range of EI facets. Thus, results within this section might not reflect understanding of each specific EI facet. However, feedback questionnaires did ask for significant learning after each session, indicating participant understanding of the skills taught during that session.

**Feedback questionnaires.** Understanding by proxy can be seen partially in the knowledge that participants found the information taught to them useful. Though there were missing data for, respectively 1, 1, 4, 2, and 4 individuals by week, no participant who completed the *session feedback questionnaires* indicated that the information was either completely or somewhat useless. All participants declared their learning to be at least neutral or above, with the highest ratings being in weeks 2, 3, and 4. *Figure 23* provides a summary. The percentage of those indicating the highest rating of usefulness is as follows: 32.4%, week 1, 35.3%, week 2, 61.8%, week 3, 58.8%, week 4, and 41.2%, week 5. Additional usefulness information was gathered from the *final feedback questionnaire* that indicated the specific content that aided participants. There were 4 participants who did not respond. However, the majority of individuals indicated that more than one skill was most useful for them. See *Figure 24* for a summary of these data.

**Figure 23: Usefulness of Sessions by Week**





**Figure 24: Most Useful Topic (Percentage)**

Feedback from the open-ended questions of the final session questionnaires reflects with greater specificity the information retained by participants following each session. Questions asking about the two most significant things learned from each session indicated that individuals were able to describe themes that were present within each session and often expanded upon their understanding. As can be seen in *Table 13*, responses for both questions about significant learning included examples surrounding the content that was taught during that session.

Table 13

*Most Significant Thing Learned by Session*

Session Number	Examples of responses to “Most Significant thing Learned”
<b>Session 1:</b> Overview of occupational stress and linking stress to the EI facets	<p>“that occupational stress (or stress in general) is a reaction to perceived negative stimuli and the observations [or] belief that they cope with it”</p> <p>“The most significant thing I learned this week is that our perception of stress alters how it effects us. I was thinking that stressful situations often depend on the context. Usually line ups don't phase me, but if I've had a particularly bad day, it could be stressful”</p> <p>“stress can go unnoticed in several different forms”</p> <p>“I learned that there are several stress release activities and they are skills that need to be practiced”</p> <p>“stress is personal and to make specific goals for ourselves for the sessions to make it actually work for us”</p>

	<p>“the idea that I can in fact change the physiological responses to stress by implementing key practices”</p>
<p><b>Session 2:</b> Learning about EI in general and understanding one’s EI</p>	<p>“what my personal EI test score was. It is important no only to be self-reflective but to know how others may see you. I learned I need to work more on self-control and management ...”</p> <p>“I was most excited to receive my EI results to be honest. I guess a lot of it was a confirmation of my own knowledge”</p> <p>“The Swinburne model of Emotional Intelligence and how I can apply it in my life”</p> <p>“I learned about the Swinburne Model and the 7 facets of the model. I also learned about my personal emotional intelligence prior to the study”</p> <p>“How the concept of emotional intelligence can be broken down into numerous aspects/classifications that are individually pertinent to our everyday functionality and life satisfaction”</p> <p>“The concept of EI. Stress management. Stress expression. The Swinburne model.”</p>
<p><b>Session 3:</b> Developing ESA &amp; EE</p>	<p>“Mindfulness is useful and applicable”</p> <p>“Activity about mindfulness -&gt; useful, applicable. Requires practice. Hard for me b/c I tend to be restless”</p> <p>“The benefits of mindfulness and accepting the ideas that cross your mind when you are trying to relax/meditate”</p> <p>“name, claim, tame, explain”</p> <p>“I learned about the many facets of expression and how the way we express ourselves greatly alters another person's perceptions.”</p> <p>“I found the discussion on the aspects of mindfulness to be the most significant thing I learned today. This includes what constitutes mindfulness, acceptance of the presence &amp; techniques that can be used to achieve such a state”</p> <p>“I learned about the many facets of expression and how the way we express ourselves greatly alters another person's perceptions”</p>
<p><b>Session 4:</b> Developing EAO, ER,</p>	<p>“I found the section on unhelpful thinking styles very useful. Particularly the discussion regarding the conversion of positives to negatives”</p>

ESM, & EMO	<p>“addressing irrational self-talk”</p> <p>“Arguing with yourself boxes are interesting and I like the idea of practicing on a friend!”</p> <p>“being aware of unhelpful thinking styles and arguing with yourself/thought stopping”</p> <p>“ABC model of emotion”</p> <p>“Anticipating emotion and alternative emotion”</p> <p>“The different forms of unhelpful thinking styles made me realize I do many of them”</p> <p>“Mood management strategies. I think its important to have tools to use when things trigger emotional reactions”</p>
<p><b>Session 5:</b> Developing ESO &amp; plan to move forward</p>	<p>“Boosting stress immunity”</p> <p>“[Identifying] my overreactions and ways to manage them helps me to avoid situations that are not necessarily [deserving] of my energy”</p> <p>“Tips for boosting stress immunity and tracking methods are great resources”</p> <p>“I found the beaker image for daily stress to be a good analogy &amp; helpful for stress management. I think it very significant that we can affect the starting level of our beaker”</p> <p>“breakdown of how to cope with feelings of anger”</p>

Note. ESA = emotional self-awareness; EE = emotional expression; EAO = emotional awareness of others; ER = emotional reasoning; ESM = emotional self-management; EMO = emotional management of others; ESC = emotional self-control.

<b>Session Number</b>	<b>Examples of responses to “Second most Significant thing Learned”</b>
<p><b>Session 1:</b> Overview of occupational stress and linking stress to the EI facets</p>	<p>“The 1-2-3 model/approach to dealing with occupational stress. It seems to be an effective model”</p> <p>“3 ways of dealing with stress”</p> <p>“learning the 1-2-3 strategy in regards to coping with stress was another significant part of today's session. I think this is an excellent strategy to</p>

	<p>break down stressors”</p> <p>“That there are coping strategies that can be utilized to manage/cope with stress”</p> <p>“that coping strategies will only work if they are practiced”</p> <p>"Find your stress balance" - I always rack my brain about whether or not I am overreacting to a given situation - it's a really good tool!"</p> <p>“Relaxation technique that can be used quickly. In the past I only had experience with time consuming meditation”</p>
<p><b>Session 2:</b> Learning about EI in general and understanding one's EI</p>	<p>“Viewing the preliminary EI scale results”</p> <p>“Getting our results back to see which areas I do well/which areas I need to spend more time with”</p> <p>“I learned that there are many ways people respond to stress and everyone handles it differently”</p> <p>“Understanding your emotions is important in controlling them”</p> <p>“Swinburne Model. I think it's great that I get to learn the different emotional approach at workplace”</p> <p>“The degree to which occupational stress and EI are related”</p>
<p><b>Session 3:</b> Developing ESA &amp; EE</p>	<p>“Name, claim, tame and explain”</p> <p>“aspects of emotional expression; importance of event vs. emotional reading; validity of emotion and implications for self moderating”</p> <p>“the 5 minute mindfulness was really helpful to give me another strategy to use”</p> <p>“learning to identify specific triggers for emotions &amp; thinking about the associated thoughts and behaviours”</p> <p>“The need to STOP in moments more regularly to remember what you're feeling”</p> <p>“learning to identify specific triggers for emotions &amp; thinking about the associated thoughts and behaviours”</p> <p>“the triad model of emotion-thought-behaviour and its feedback loop”</p>
<p><b>Session 4:</b> Developing</p>	<p>“Self-management strategies → the little things we do everyday to manage</p>

EAO, ER, ESM, & EMO	<p>our emotions without even realizing we are doing so. E.g., I listen to music or cook or eat chocolate”</p> <p>“The ABC model has the potential to help identify triggers and deal with problems more effectively”</p> <p>“Unhelpful thinking styles I think these help me become more aware of the way in which I think that brings me down”</p> <p>“how to attack stressors from point ABC”</p> <p>“strategies for emotional awareness for self and others”</p> <p>“Examples and types of unhelpful thinking styles”</p> <p>“Putting names and definitions to "unhelpful thinking styles" and "cognitive strategies". It really helps me to be more mindful and reflective to thought process that naturally occur”</p> <p>“emotional management strategies”</p> <p>“I really liked the "learn to argue" square and found it a helpful and accessible way of monitoring emotional reactions. We often forget the process of creating an emotion and I would love to master this interception”</p>
<b>Session 5:</b> Developing ESO & plan to move forward	<p>“boosting stress immunity improves emotional self-control. Increase the length of your fuse”</p> <p>“building/boosting my stress immunity”</p> <p>“It is helpful to practice new emotional management skills in times of strong emotion and see what is most effective when applied to stressful situations”</p> <p>“Strategies for dealing with strong emotions”</p> <p>“goal setting at the end - I agree that extra reinforcement and reflection is very helpful in stress immunity. Having an action plan helps me not feel helpless or frustrated”</p> <p>“How to think about my emotions”</p>

Note. ESA = emotional self-awareness; EE = emotional expression; EAO = emotional awareness of others; ER = emotional reasoning; ESM = emotional self-management; EMO = emotional management of others; ESC = emotional self-control.

**Homework sheets.** One worksheet asks that participants respond to their individual EI profile. Participants were provided with the scores from the GENOS EI inventory that was completed pre-program and provided an interpretation of their specific EI scores for each EI facet compared to the norm. These feedback data were benchmarked as “Low Average Emotional Expression;” or “High Average Emotional Self-awareness,” for example. Written responses to these results reflected a relatively high level of content understanding related to their *awareness* of their own EI skills.

In response to the question “How do you feel about your EI profile? How do your results link to your experience of stress at university, work, or in other areas of your life?” participants demonstrated a relatively high level of ability to draw links between their scores and the impact this had on their lives. For instance<sup>8</sup>, 87.1 % indicated recognition of how the pattern of EI results is present in their daily activities. This was independent of whether they were happy or unhappy about these results. They were able to ‘recognize and explain’ their strengths and limitations and need for improvement. There was fair agreement between the two raters,  $\kappa = .351$ ,  $p = .048$ . The following excerpts provides examples:

“My results really explain my experience of stress at university... I also had 2 relationships in the past 2 years. Both ended unpleasantly, and I think they are related to my low result of emotion reasoning and emotional self-control. I think my EI profile helps me to think about my emotion and its effect when I am at work. Because I have 2 jobs and both are very stressful at the moment, I need to improve my emotional intelligence.”

“I'm not surprised about my EI profile. I knew which areas I want to improve on (they were the ones I scored low on). I tend to be more passive in situations where I have to report to a superior (e.g., Associate Teacher). There were occasions where I completely disagreed with the treatment of a student, but I chose not to breach the subject with her because I felt in the situation it was better not to. However, by not verbalizing my emotions, they harbor and fester for longer periods of time.”

“Although I initially thought that some of the components of the EI scale would have scored higher, I reasoned that perhaps I may not be so emotionally aware and/or available as I thought I was. I think that this EI profile may in fact provide me with greater insight to my personality and some strengths of mine (e.g., I tend to think logically and reason everything). I definitely do see myself taking my emotions out of the equation at work or

---

<sup>8</sup> Inter-rater reliability classifications of Cohen's Kappa ( $\kappa$ ) are based on Altman (1999;  $< .20 =$  poor,  $.21 - .40 =$  fair,  $.41 - .60 =$  moderate,  $.61 - .80 =$  good,  $.81 - 1.00 =$  very good). Percentages are based on the ratings of the more senior rater after having looked over discrepancies.

university and reasoning about the things that I do.”

“I was surprised to see that my EE and ESM are low. Sometimes, I do feel that I cannot express myself in terms of emotions. I thought I have better control of emotional self-management. Quite close to the level that I evaluate myself EE and ESM can show me that I need to work on those aspects to better manage my emotions.”

Individual responses to their EI profiles ‘ranged emotionally’ as being negative (12.9%), neutral (16.1%), and positive (71%). There was good agreement between the two raters,  $\kappa = .703, p < .0005$ :

“I was a bit disappointed when I first saw the scores but now the more I thought of it, the more I felt ambiguous about it. At the moment, I don't know what to think of it As the professor said, it doesn't state whether I am emotionally intelligent or not, rather it more of how I perceive myself to be and how I think I will respond to certain situations.”

“I feel okay about my EI profile. I think my results show what it's like to live on your own for the first time w 3 girls you don't know.”

“I feel good about my EI profile. I feel that I am fairly strong when it comes to EI, so I was not surprised. My areas for improvement do not surprise me either as I often find myself ruminating about my work + school days when I get home.”

Responses to the scores also indicated that opinions differed as to the ‘level of accuracy of results,’ with some noting that they agreed (41.9%), whereas others disagreed (22.6%), described mixed accuracy (19.4%) or did not mention accuracy (16.1%). There was very good agreement between the two raters,  $\kappa = .862, p < .0005$ :

“I don't think my profile reflects how I manage myself. I got very low scores in everything. I know that I am emotionally self aware, as I can tell when I'm angry or upset. It just takes a while to shake myself out of a mood. When in a work situation though, I always power through it.”

“I feel my EI results were very accurate, I am not really stressful person and tend to be in tune with my emotions. Throughout university it was very rare to see me stressed out over school (I can really only remember 2 or 3 times). The same goes for work and other areas of life, the only emotion I have trouble controlling is the eye roll (haha)”

“I feel as though my EI profile was/is a pretty accurate representation. The only area that I was a little surprised about was emotional expression (average). I thought I would have scored lower because its really hard for me to 'cover up' emotions, even if I manage my tone, and what I say, it's hard for me to cover up facial expressions/ body language”

Another theme that evolved was that of 'expectation,' such as having received results that were surprising (38.7%), unsurprising (35.5%), neutral (9.7%), or conflicting (16.1%). There was very good agreement between the two raters,  $\kappa = .953, p < .0005$ :

"I was fairly surprised by my EI profile because I scored higher in many categories than I expected. This feeling of discord between my results & how I rate myself as a stress/emotion manager (based on how I perceive others) is difficult to modify. It may suggest that the appearance of how many cope with emotions does necessarily match their feelings/thoughts."

"I feel my EI profile results fall within my expectations, and accurately reflects how I am typically able to identify or act on emotional awareness."

"I was very surprised to find that I have Very low Emotional self-control but 64% of people fit into this category and I tend to avoid expressing strong emotions, such as anger, using appropriate methods. I have High Emotional Reasoning, which makes sense because I am a logical, analytical thinker."

"I feel as though my EI profile was/ is a pretty accurate representation. The only area that I was a little surprised about was emotional expression (average). I thought I would have scored lower because its really hard for me to 'cover up' emotions, even if I manage my tone, and what I say, it's hard for me to cover up facial expressions/ body language."

Although, the majority indicated an openness (35.5%) or neutrality (48.4%) towards their EI results (see first set of examples), others remained defensive (16.1%) to negative results or attempted to explain them on external events. There was good agreement between the two raters,  $\kappa = .698, p < .0005$   $\kappa = .862, p < .0005$ :

"To be honest I am quite confused by my results. I would consider myself to have relatively high emotional intelligence. I feel like I am actually really self-aware in terms of my emotions and can express my feelings well. I also feel like I am attuned to others emotions and I can help others manage their emotions. I feel that the results are not typical of my usual self. I am really stressed and unable to control or deal with my emotions regarding my Mums health, this is part of what I was thinking during this test."

"I feel that my EI profile is designed to rate me at a Low EI by design so I will recognize the need to continue with the EI study. While I already felt my EI needed some improvement, the EI profile seems exceptionally low. I only felt deadline stress at university, but university does not really require one to enter into very stressful social situations."

Some participants did seem to 'equate low levels of stress with high EI' (35.5%). There was good agreement between the two raters,  $\kappa = .609, p < .0005$ :



“I think my profile is quite representative of how I perceive my stress management skills. However, I'm not sure how honestly I'm able to understand my stressors, maybe a behavioural test would provide different results.”

“I am thoroughly pleased with my results as it illustrated that I have successfully been able to balance academics, social life, and extra-curriculars.”

Looking at further aspects of the homework worksheet on participant EI profiles, 96.7% were able to identify a ‘significant opportunity for development,’ with 53.3% specifically indicating that they would attempt to implement this into their everyday lives and over half specifying a positive outcome, for example:

“I really want to work through emotional expression. One way I deal with some stress is talking with my partner about it. I would like to be able to find an additional method for dealing with stresses. By talking with him less about negative stress stuff, I think we would enjoy a more positive relationship. (I could now see my ranting could take a toll on our relationship).”

“A significant opportunity for development for me would be emotional self-management. I would try to implement this in my everyday life by finding activities that make me feel positive at work. Right now, I would consider my work to be school and school work so I want to try to find positive activities when I feel stressed.”

“I am becoming more in-tune to my emotions, responses and reactions by keeping a journal of my practicing mindfulness and doing yoga. I often realize my reactions shortly after but I would like to stop the reaction before I have performed it. I can do this by trying to become more verbally expressive or trying breathing techniques. The outcome would be becoming more patient, level-headed, and clear-minded.”

### **Interpretation of Objective 4b Results: To Evaluate Content Understanding**

While it is challenging to assess program comprehension without directly testing the material, or administering some form of performance testing, the above measures did aid in this determination. Program usefulness as an indicator revealed that the majority of participants indicated usefulness to be at above the neutral point, with only a small minority indicating neutral or below as their choice. Additionally, participants were able to specify their most useful topic, with just under half indicating more than one of the content topics to be most useful for them.

Asking individuals what they learned is also a direct way of assessing whether they understand the material (Vingilis et al., 2011). Participant responses to the top two most

significant concepts learned per session revealed that the information that was being delivered did come through. However, the extent to which this was the case differed by session.

Session 1, the overview of occupational stress linked to EI, was well represented. Responses generally exemplified an understanding that a stressor is only a stressor if perceived as such and that it is possible to cope/change personal reactions to stress. Many participants noted the method that was taught in class to reduce the impact of stress (i.e. 1-2-3 method).

Session 2, in which the individual EI facets were introduced and personal EI discussed, commonly included mention of: the Swinburne model, a breakdown of EI facets, an understanding of how EI impacts stress, and/or the importance of self-reflection on his/her own EI score.

Session 3 focused on the facets of emotional self-awareness (ESA) and emotional expression (EE). Common responses included reference to a range of mindfulness activities such as those used to improve ESA, and/or made reference to the main technique taught for EE improvement, “Name, Tame, Claim, and Explain,” either by naming it or identifying how either of these applied to their learning of these skills.

Session 4 had more variation in participant responses, possibly because of the larger number of skills taught during this session. However, responses still covered material learned during the session. The most frequent responses involved mention of self-talk (e.g., “arguing with oneself”) or specified learning about unhelpful thinking styles, both skills used to increase emotional self-management (arguably also emotional reasoning). Identification of self-triggers, the emotion management model, and/or other notes of management strategies for reasoning, directly taken from class, were also common. Responses relevant to emotional awareness and management of others were much less present, though they did arise. The restricted focus on the skills related to awareness and management of others, fits with later results indicating that these skills were practiced less frequently and perceived to be related to lower rates of improvement in general.

Finally, session 5 which taught emotional self-control and how to maintain the new skill-set, had numerous responses that referred directly to the strategies or metaphors used in class. For this EI skill, emphasis was given to boosting one’s stress immunity, the “stress beaker,” or other means of coping with stress in the moment. Action plans for the future were also

mentioned. Generally, individual answers were linked to the main activity, strategy, or skill outlined in each session, representing the salience of those ideas and emphasizing that the main concepts came through.

Moreover, responses on the homework sheet, asking individuals about their personal EI profile, revealed information about participant understanding, specifically as it related to their personal reflection of EI in their daily lives. Though responses often gave some detail about individual attitudes, the ability to relate this information to the specific EI facets even when they did not agree with the results, pointed toward their understanding of the theoretical and practical skill. With certain exceptions where there was the implication that low stress was equated with high EI, most described the EI skills correctly. Despite having a negative, positive, surprising, or expected response, or indicating the perceived result to be inaccurate, most individuals were able to specify why or why not results did or did not apply to them, as well as provide examples of the impact of this EI facet in their daily lives.

One noteworthy observation was that despite understanding what the EI facets were and how they worked, there was a minority of individuals who were defensive about negative results, and thus did not seize an opportunity for development, or others, who when filling out other homework sheets gave contrary information (e.g., stated they were good at something they described correctly and then gave a contrary example).

It can be conjectured from this, that understanding the concept may be a necessary but not sufficient condition for skill improvement as there must also be an openness and willingness to reflect on thoughts and behaviors. This is related also to having “readiness-to-change” (Prochaska, DiClemente, & Norcross, 1992) and an ability to engage in self-reflection (Kong, 2010; Zeidner et al., 2003), which are both noted in the program theory section. For example, if an individual is defensive regarding his or her EI results and criticizes the test rather than reflecting on personal abilities, there is a lower likelihood of behavior change. In other words, understanding the EI facets themselves may not always correspond to individuals’ understanding of their own abilities and how to use these skills.

Many of the comments that reflected the extent to which introspection was occurring, were linked to expressions surrounding the accuracy or expectations of individual results. Regardless of the perceived accuracy of the results, most participants used a combination of

positive and negative descriptors that reflected a range of self-reflection, with only a small number expressing one descriptor of self-reflection or remaining neutral. Positive descriptions for those who did *worse* than expected included comments about: room for improvement, the benefits of the course and receiving their EI profiles, alternative positive aspects of themselves, and normalizing their scores in comparison to others. Negative descriptions included talking about the discrepancies or needing to improve (e.g. I am less skilled; need to gain more), expressing negative emotions (disappointment, confusion, embarrassment), and attempting to rationalize low scores with external blame (e.g., being anxious during the test). For those who believed their scores were *accurate*, the positive descriptions included those of their abilities and behaviours (e.g. I am fairly strong; take care of self), positive feeling states (e.g. feel good), and congruence with feedback from others. Negative descriptions included describing not having certain abilities or things being difficult (e.g. hard for me), having negative internal states (e.g. harbour, fester), being hard on the self, and the test being inaccurate. The responses that seemed to stand out as either overly positive, or negative with external blame, could have been written by those resistant to feedback from others or those who have difficulty with introspection. In contrast, those who expressed ways in which to assist change in the future, such as by taking this course or working on/practicing the skills learned, suggests a higher level of openness.

In general, the majority of participants revealed motivation and openness (or at least neutrality) toward their results. In their EI profile question responses, they also showed positive understanding of the skills themselves. Even though the EI measure tapped into both handling personal emotions and the emotions of others, the vast majority of participants were concerned with establishing the accuracy of emotional competencies directed towards the self. The training sessions required considerable personal introspection, and this seems to have led to the positive rating regarding consideration of the self as a focused priority. Despite not being able to assess a specific understanding of each EI facet, there was a general consensus regarding EI facet salience. This is reflected in the finding that five of the seven skills were prominently understood.

The following section shifts from what the understanding of EI is, to how it translates into improved outcomes.

### Objective 4c: To Evaluate Application of Skills (Figure 2 Box 4)

As with the section evaluating content understanding, the results within this section provide examples of the application of various EI skills based on participants' choices of skill to practice.

**Feedback questionnaires.** Both sets of feedback questionnaires asked participants about the application of the learned skills to daily life. Within the *session feedback questionnaires*, every respondent with the exception of one in week 4, rated above the midpoint on a five-point Likert scale, that they appreciated how the information taught could be applied to situations they have encountered, or will encounter in the future. Understanding the application of learning by week is summarized in *Table 14*:

Table 14

#### *Understanding the Application of Information to situations*

	Percentage of Respondents (Frequency)				
	Not at all		Somewhat		Very much
<b>Week 1 (n = 33)</b>	0(0)	0(0)	12.1(4)	27.3(9)	60.6(20)
<b>Week 2 (n = 32)</b>	0(0)	0(0)	6.3(2)	56.3(18)	37.5(12)
<b>Week 3 (n = 30)</b>	0(0)	0(0)	10(3)	26.7(8)	63.3(19)
<b>Week 4 (n = 32)</b>	0(0)	3.1(1)	6.3(2)	25.0(8)	65.6(21)
<b>Week 5 (n = 29)</b>	0(0)	0(0)	6.9(2)	20.7(6)	72.4(21)

85.3% of the participants completed questions regarding their use and intention to apply skills learned within the EI program. 93.1% of the individuals indicated that they have already used at least one of the skills/information discussed during the EI program in their everyday life. 89.7% of these individuals reported that they have been doing so to a greater extent than before the program. Of those who stated they have not yet used these new skills, the majority indicated an intention to use these skills and knowledge in future situations. When asked to provide an example of skill use, 96.6% were able to specify or expand on the previous questions:

“I’ve been practicing mindfulness as a tool for stress management this week as I write my psych Ed assignment”

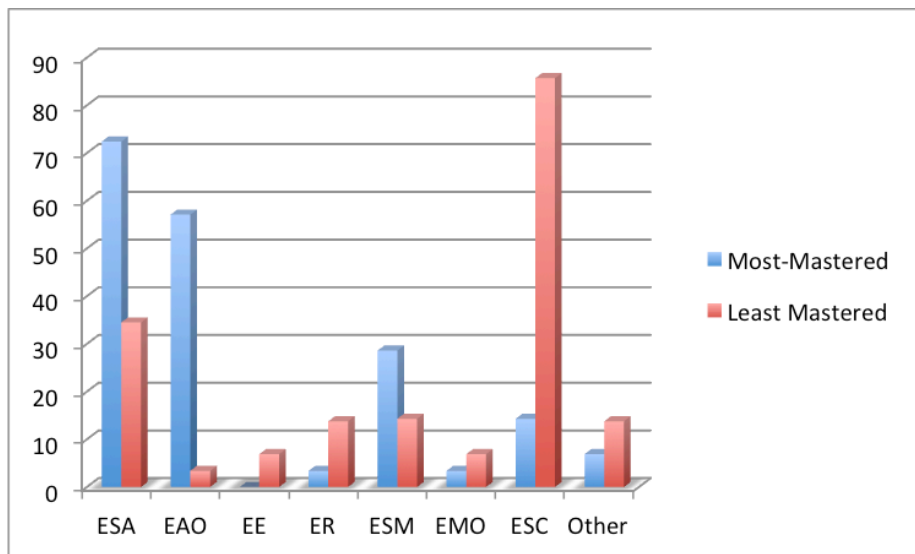
“Breathing, Mindfulness, Modification of environment & conception”

“I have modified the practices I initially did as a result of this program”

“Choosing appropriate strategies to manage different high emotion situations”

As part of the *final feedback questionnaire*, participants were asked to recall the skills practiced throughout the duration of the program and indicate the emotional intelligence skill they felt they had mastered the most and the least. Both had perfect inter-rater reliability ( $\kappa = 1, p < .0005$ ). This question yielded an 85.3% completion rate. Skills related to emotional self-awareness (ESA) were most prominently indicated as the “most-mastered skill” (72.4%), whereas emotional self-control (ESC) was the most common skill they “felt they needed to work on” (85.7%). It is important to note that the percentages in *Figure 25* are based on numbers that include the 7 participants who indicated 2 skills. Noteworthy, some individuals may have put examples of the same skill for both most- and least-mastered, for example mindfulness for “most-mastered” and body scan for “least-mastered” which are both considered ESA. Some individuals listed skills that could not be directly categorized into a specific EI skill such as “working through negative emotions.” These cases are represented in the “other” category.

**Figure 25: Most and Least Mastered Skill Post-Program**



Note. ESA = emotional self-awareness; EE = emotional expression; EAO = emotional awareness of others; ER = emotional reasoning; ESM = emotional self-management; EMO = emotional management of others; ESC = emotional self-control.

**Goal Setting, Practice Logs, and Reflection Paragraphs.** In addition to the evidence of skills application that comes from completion of goal setting, homework, and skills practice, a selection of responses were analyzed in greater detail regarding the extent to which participants applied specific skills during non-program hours.

An examination of the *practice logs* specifically notes that between 67.6% and 88.2% of the participants practiced some form of skill(s) each week, indicating a general application of learning. Further analysis of content revealed that the most-often practiced skills in general were those related to emotional self-awareness or emotional self-control/management—see discussion; such as mindfulness, breathing exercises, body scan, or deep muscle relaxation. *Table 15* shows a breakdown of the skills practiced by week. All of these specific techniques were taught and most demonstrated in class.

Table 15

*Breakdown of Skills Practiced by Week*

Skill Practiced	% of Participants(Frequency N)			
	Week 1	Week 2	Week 3	Week 4
Mindfulness Practice (e.g., mindful eating, etc.)	14.7(5)	14.7(5)	52.9(18)	44.1(15)
Mindfulness Meditation/Breathing Exercises	64.7(22)	55.9(19)	64.7(22)	50.0(17)
Muscle Relaxation Exercises	32.4(11)	41.2(14)	20.6(7)	8.8(3)
Body Scan	32.4(11)	29.4(10)	32.4(11)	26.5(9)
“Emotional Self-Awareness”	0(0)	0(0)	5.9(2)	2.9(1)
Exercise	8.8(3)	2.9(1)	14.7(5)	5.9(2)
Cognitive Restructuring (“Arguing with self”)	5.9(2)	14.7(5)	20.6(7)	14.7(5)
Other	14.7(5)	14.7(5)	17.6(6)	8.8(3)

When practice frequencies were further individually analyzed, 34 individuals in the program group practiced at least one or more weeks, with 41.2% (n = 14) practicing all 4 weeks; 35.3% (n = 12) 3/4 weeks; 14.7% (n = 5) 2/4 weeks; and 8.8% (n = 3) 1 of the four weeks. Week 5 practice was not officially assessed. Individual participant patterns were to either practice similar skills each week suggesting that if they practiced mindfulness on week one, they tended to continue with similar skills practice after each session, and/or to practice different skills dependent upon those discussed in the relevant session. For example, if a new idea was introduced they might have added it to their practice list. For the most part, with very few exceptions, practice logs only included specific skills taught in class.

A further means of identifying the application of skills was to closely examine the participants' *reflection paragraphs*. Given that some people did not always fill out practice logs, but did complete their reflections, it was another way to assess which EI skills were focused on in application, despite not being officially "practiced." A variety of themes could be identified when analyzing the goals and reflections written out by participants that indicated their rehearsal of program-related material. Sample results are provided as they were typically written using more detail. Percentages of participants that fit into each of the categories discussed are presented after each set of examples.

A majority of participants made reference to their goals of the week or the skills they were currently practicing. It was common for participants to 'assess their success' of the goal they had planned; some describing mixed achievement, ranging from describing their success to discussing problems that arose when attempting to do so (*Table 16*). There was good agreement between the two raters, by week, showing  $\kappa_1 = .810, p < .0005$ ,  $\kappa_2 = .757, p < .0005$ ,  $\kappa_3 = .827, p < .0005$ , and  $\kappa_4 = .861, p < .0005$ , respectively by week. Some examples include:

"I believe that I fulfilled my goal and incorporated the techniques learned in Session 1 to ultimately reduce my stress levels and cope with situations of potential anxiety.... I felt that my abilities to use these skills strengthened with the knowledge of these stress reduction strategies."

"I felt more dedicated and concentrated on my skills this week. I found the body scans during the evening to be extremely helpful to aiding my sleep & clearing my mind before bed. I also strived to re-interpret situations by changing my perspective. I found this to be very helpful."



“I wanted to focus on breathing every night before bed. I found that it almost made me more worried because my mind would wander to things I was nervous/stressed about. Other nights I just felt too tired to do it.”

Table 16

*Tendency to Assess Success of Weekly Activity*

	Percentage of Participants (Frequency)			
	Week 1	Week 2	Week 3	Week 4
<b>Success meeting Goals</b>	27.6(8)	25.0(7)	34.6(9)	42.9(9)
<b>Problems meeting Goals</b>	13.8(4)	14.3(4)	7.7(2)	9.5(2)
<b>Mixed Success</b>	27.6(8)	28.6(8)	50.0(13)	19.0(4)
<b>No mention of Assessment</b>	31.0(9)	32.1(9)	7.7(2)	28.6(6)

Others additionally discussed ‘strategies that could aid success’ in improving goals (Table 17) such as more practice, developing new strategies/goals/techniques, and thinking about thoughts and actions. There was fair to good agreement between the two raters, by week, showing  $\kappa_1 = .623, p = .001$ ,  $\kappa_2 = .500, p = .008$ ,  $\kappa_3 = .612, p = .001$ , and  $\kappa_4 = .269, p = .149$ , respectively by week:

“I don't feel I did as well with my goal this week. Maybe I need to take smaller steps towards improvement. I have been sick, and I feel like this has decreased my tolerance for stress...I really did not focus as well as I could have. Here's hoping that next week is better!”

“This week I really tried to practice different types of mindfulness activities to find a “best fit”. I didn't find one that worked best for me (yet), but I have found that I'm much more at ease when I practice them. Also I really feel like I'm able to accomplish more goals and be more present in my daily activities, since I've started practicing the various techniques discussed in [our] meetings.”

“This week I failed to achieve my goals. Although, I did pause and recognize my emotion. But I failed to name the emotions in the process of “Name, Tame, Claim, Explain”. Also I realize I practice more on the skills such as “breathing and body scan.” this week. By sharing these skills with my friends and roommates, I remember to use these skills more.”

Table 17

*Tendency to Suggest Ways to Improve*

	Percentage of Participants (%)			
	Week 1	Week 2	Week 3	Week 4
<b>Mentioned strategies for Improvement</b>	24.1(7)	25.0(7)	23.1(6)	42.9(9)

There were also responses that involved discussion of ‘growth and increasing mastery’ (Table 18). There was good to very good agreement between the two raters, by week, showing  $\kappa_1 = .813, p < .0005$ ,  $\kappa_2 = .711, p < .0005$ ,  $\kappa_3 = .833, p < .0005$ , and  $\kappa_4 = .904, p < .0005$ :

“I feel like I am getting better at slowing down + being more mindful. Body scans are hit & miss some nights though.”

“I am starting to become more comfortable with mindfulness. I hope to continue with these successes.”

“The relaxation exercises are definitely beneficial. I am working on identifying unproductive thinking habits, as well as identifying multiple perspectives to influence my own opinions/ reactions to 'perceived stressors'.”

“I have practiced being more mindful of others feelings. In fact a classmate commented that I was being a lot gentler on people making careless mistakes...”

Table 18

*Tendency to Discuss Level of Mastery*

	Percentage of Participants (%)			
	Week 1	Week 2	Week 3	Week 4
<b>Discussed positive growth/improvements in skills</b>	27.6(8)	10.7(3)	38.5(10)	47.6(10)

‘Mention of difficulty’ level (Table 19) was also quite common with good to very good agreement between the two raters, by week, showing  $\kappa_1 = .665, p < .0005$ ,  $\kappa_2 = .460, p < .0005$ ,  $\kappa_3 = .780, p < .0005$ , and  $\kappa_4 = .527, p < .0005$ :

“I set a goal of trying to practice being mindful, as well as trying to do body scans each night. The body scans went well but being mindful was difficult. The deep muscle

relaxation was very nice, but I forgot to do it after the first day. It makes me really want to try harder this week.”

“This week the goal I set for myself was less challenging because I know it would be a busy week. The goal was simple, to perform body scans. It was much easier to do a scheduled body scan, rather than when in a time of stress. I did two body scans while I was stressed and it felt much better.”

Table 19

*Tendency to Discuss Difficulty*

	Percentage of Participants (Frequency)			
	Week 1	Week 2	Week 3	Week 4
<b>Say it was Difficult</b>	17.2(5)	10.7(3)	19.2(5)	4.8(1)
<b>Mixed Difficulty</b>	10.3(3)	10.7(3)	11.5(3)	14.3(3)
<b>No mention of Difficulty</b>	72.4(21)	78.6(22)	69.2(18)	81.0(17)

Reference was sometimes made to ‘personal issues’ such as work/academic demands, time issues, problems concentrating, having too many goals/being too ambitious, personality problems, or in general finding it hard to change. It was also frequently noted how they applied their skills to these problems or daily tasks (*Table 20*) with good to very good agreement between the two raters, by week, showing  $\kappa_1 = .750, p < .0005, \kappa_2 = .792, p < .0005, \kappa_3 = .879, p < .0005,$  and  $\kappa_4 = .642, p = .001$ :

“I liked some of the activities I practiced this week. I feel stupid (like a pain to everyone else) when I drive the speed limit, but stressed that I'll get a ticket when I drive too fast. I like talking to other drivers (whether it be "thanks for letting me merge" or "What are you doing-it's green!"). It seems like, as with a lot of learning, metacognition is a big part of being successful in developing EI. It's always good to think about what you are thinking/ doing.”

“The goal I set for myself was to be aware of my emotional reactions during the next week. For example, If I found myself getting stressed over something (i.e., Having to tell my 2 year son numerous times not to bite) I would pause while in the situation and ask myself " is this worth raising my voice?" The answer was no, so I chose a more clam tone of voice to address [this] biting situation.”

Table 20

*Tendency to Discuss Personal Problems*

	Percentage of Participants (%)			
	Week 1	Week 2	Week 3	Week 4
<b>Discussed personal issues and applied skills</b>	31.0(9)	25.0(7)	19.2(5)	23.8(5)
<b>Discussed personal problems and did not apply skills</b>	6.9(2)	7.1(2)	0(0)	0(0)
<b>No mention of personal problems</b>	62.1(18)	67.9(19)	80.8(21)	76.2(16)

There were also a few cases where individuals discussed the ‘rationale’ behind picking specific goals and activities or explained why they did a certain activity (*Table 21*) with good to very good agreement between the two raters, by week, showing  $\kappa_1 = .858, p < .0005$ ,  $\kappa_2 = .643, p < .0005$ ,  $\kappa_3 = .831, p < .0005$ , and  $\kappa_4 = .710, p = .001$ :

“The specific time management goal was reasonable, realistic and had a time frame I could work with. This is important and a strategy I respond well to. I enjoy crossing completed tasks off a list and find it distressing”

“I think that practicing the breathing technique was a great way to get me thinking about stress in my life. I could see this technique being a useful tool to use in the future.”

Table 21

*Tendency to Describe Rationale Behind goal*

	Percentage of Participants, % (Frequency, N)			
	Week 1	Week 2	Week 3	Week 4
<b>Gives Rationale</b>	41.4(12)	50.0(14)	38.5(10)	47.6(10)

Another theme that came through was ‘attitude toward goals’ - positive, neutral, and negative attitudes toward the material were often evident (*Table 22*) with very good agreement between the two raters, by week, showing  $\kappa_1 = .893, p < .0005$ ,  $\kappa_2 = .770, p < .0005$ ,  $\kappa_3 = .851, p < .0005$ , and  $\kappa_4 = .913, p < .0005$ :

“Additional activities are really helpful to consolidate all information we received from last week. Sometimes, you do not realize it until someone helps you to remind and concentrate on those issues.”

“I focused on being more mindful in [my] day to day life: set out to try out a variety of mindfulness activities throughout the week. I did feel that this made a positive difference in my well-being”

“Being prepared helped with the anxiety but[ burned] me out leaving less time for myself. The mindfulness and relaxation method seemed to help, but I still often couldn't throw that sick feeling in my stomach.”

“I found it interesting doing the body scan because I never really noticed how tensed up I got when I feel stress and how much I relieved by just un-tensing. I found the deep muscle relaxation difficult because I would tense and not really feel the release as much as if I was actually tensed up.”

Table 22

*Tendency to Display a Range of Attitudes*

	<b>Percentage of Participants, % (Frequency, N)</b>			
	<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>
<b>Positive Attitude</b>	34.5(10)	32.1(9)	23.1(6)	28.6 (6)
<b>Negative Attitude</b>	17.2(5)	3.6(1)	0(0)	4.8(1)
<b>Mixed Attitude (or Conflicting)</b>	3.4(1)	10.7(3)	7.7(2)	4.8(1)
<b>Neutral Attitude (Factual)</b>	44.8(13)	53.6(15)	69.2(18)	61.9(13)

Responses from reflections were then categorized into one of the 7 EI facets (or the ‘other’ category) in order to demonstrate the breakdown of focus on the range of EI skills by week (*Table 23*). This means that the participants’ reflections included reference to the noted EI skill. Participants often discussed more than one of the 7 skills each week and thus they are not mutually exclusive. When looking at whether the reflections were, in general, more self-focused versus other-focused, 93.3% in week 1, 89.3% in week 2, 84.6% in week 3, and 81.0% in week 4 were self-focused across a range of skills. Percentages are taken from those who did fill out a reflection that week.

Table 23

*How Reflection Paragraphs Represent EI skills*

<b>EI Skill Represented in their Self-Reflection</b>	<b>% of Participants(Frequency, N)</b>			
	<b>Week 1</b>	<b>Week 2</b>	<b>Week 3</b>	<b>Week 4</b>
Emotional Self-Awareness	69.0(20)	57.1(16)	92.3(24)	63.6(14)
Emotional Awareness of Others	0(0)	3.6(1)	7.7(20)	13.6(3)
Emotional Expression	3.4(1)	7.1(2)	3.8(1)	0(0)
Emotional Reasoning	13.8(4)	10.7(3)	11.5(3)	31.8(7)
Emotional Self-Management	44.8(13)	33.3(9)	26.9(7)	55.0(11)
Emotional Management of Others	0(0)	3.6(1)	3.8(1)	4.5(1)
Emotional Self-Control	3.4(1)	10.7(3)	0(0)	0(0)
Other (non-EI skills)	27.6(8)	28.6(8)	3.8(1)	27.3(6)

Note. As is very difficult to categorize responses into EI skills given the perceived overlap, inter-rater reliability was not reported for this. The categorizations were based upon the viewpoint of the author as she was the one teaching the skills and thus labeled each activity. See limitations section of discussion.

**Interpretation of Objective 4c Results: To Evaluate Application of Skills**

The extent to which individuals apply EI skills encompasses a range of actions that also relates to the frequency and effectiveness to which they are applied. The majority of the participants responded affirmatively regarding the application of the skills to daily encounters. Practice logs also provided an indication of the practical implications of the application of skills. A general analyses of practice showed that between 67.6% and 88.2% of the participants practiced some form of skill(s) each week. However, the extent to which participants practiced consistently, was much less common. A range of reasons may govern this pattern, including a failure to fill out practice logs, reflection on skills without practicing concretely, reduction in motivation by the last week, and large workload preventing practice. Further implications of patterns of practice will be discussed in the general discussion.

While there was variability in the general skills practiced by week, there is a clear bias toward the specific, more concrete skills that were demonstrated in class. Responses could be mostly categorized into skills that fit directly into either emotional self-awareness (ESA; mindfulness practice, mindfulness meditation/breathing, body scan, muscle relaxation) or emotional self-management (ESM; cognitive re-structuring, exercise). However, additional analysis of the reflection paragraphs to further understand how skills were being thought of and applied, showed that the practice of specific skills is not always straight-forward. Noted skills were often used to aid the improvement of a range of EI facets. Specifically, skills taught under one EI facet can often be categorized into other EI facets depending on how they are used (e.g., mindfulness for the purpose of emotional management or self-control; cognitive re-structuring for the purpose of emotional reasoning). The attempt to categorize the skills talked about in reflections by week in *Table 23*, indicates that despite practice logs showing practice of the above-noted skills as they link to specific EI facets, other EI facets were also being worked on.

Results also indicate congruence with EI profile patterns in the understanding section, showing a focus on EI skills related to the self rather than to others. There are parallels between skills indicated on practice logs, the strong content focus on ESA and ESM in reflections, and the prominence of ESA and ESM as the ‘most-mastered’ skills on the feedback forms. The two EI facets listed as ‘least-mastered,’ were also ESA and ESM, indicating once again a focus on these facets and potentially improvement in some but not all aspects of them. Interestingly, emotional awareness of others (EAO) comes out as the second ‘most-mastered’ skill and emotional self-control (ESC) as the fourth. Improved ESC may reflect the outcome of the practice of ESA and ESM. Perceived improvements in EAO as well as further attempts to address the relationship between facets are presented in the general discussion.

Further analysis of reflection paragraphs suggested that the areas of focus shifted across the weeks to align somewhat with the EI facet taught that week. However, ESA and some ESM skills remained constant throughout all sessions as those most commonly addressed. Themes from the reflection paragraphs showed an increase in the discussion of success in meeting goals, statements of ways to improve this success, and levels of skill mastery, in addition to a decrease in mention of difficulty from week 1 to week 4. These can be seen as an indication of commitment to practice. The notion that some individuals tended to relate their weekly practice to personal difficulties, reflected a positive indication that participants were engaging in self-

reflection; approximately half of the participants each week provided a rationale for their choice of skill practice. For the participants who successfully met their goals, goal setting improved their lives in some respect. Further, irrespective of whether they met their goal, the majority of participants said that they at least worked on/practiced aspects of EI during the week. More participants reported that the goals they set and practiced helped or improved their lives compared to those who reported they did not help. There is a general indication that participants were implementing changes into their everyday lives as a result of their involvement in the program.

### **General Evaluation: Participant Satisfaction**

*Table 24* summarizes the Likert-scale questions from the feedback questionnaires that are relevant to participant satisfaction with the EI program. 88.2% of the participants completed the final feedback forms and of these, the majority of participants indicated that the sessions were beneficial, and that they would recommend both the content and the speakers to others.



Table 24

*Program Satisfaction Responses from Final Feedback Questionnaire*

Questions (n = 30)	Percentage of Respondents (Frequency)				
	Extremely Unhelpful	Somewhat Unhelpful	Neutral	Somewhat Helpful	Extremely Helpful
Overall, how would you rate the 5-session EI program you have just complete?	0(0)	3.3 (1)	6.7(2)	33.3 (10)	56.7(17)
	Extremely Unsatisfied	Somewhat Unsatisfied	Neutral	Somewhat Satisfied	Extremely Satisfied
How satisfied are you with the quality of the EI Program?	0(0)	3.3 (1)	3.3 (1)	33.3 (10)	60(18)
	Extremely Ineffective	Somewhat Ineffective	Neutral	Somewhat Effective	Extremely Effective
How would you rate the in-class presentations and PowerPoint presentation?	0(0)	6.7(2)	10(3)	40(12)	43.3(13)
	Yes	No	Other		
Would you recommend this program to others?	96.7(29)	0(0)	3.3(1) "neutral"		
Would you recommend a program on the topic of Emotional Intelligence to others?	100(30)	0(0)	0(0)		
Would you recommend the speakers to others?	96.7(29)	0(0)	3.3(1) "?"		

Participants differed in their perception of helpfulness of each session, with 33.3% stating that session three was the most helpful of the 5 sessions. In descending preference, the sessions were considered as follows: 23.3% chose session 4; 10% session 5; 3.3% sessions 1 and 2; and 20% indicated that two or more sessions were equally as helpful. The majority of individuals endorsed more than one learning format to be helpful including small and large group discussion, individual reflection, goal setting exercises, homework worksheets, skills practice, and lecture with 86.7% indicating 3 or more of these responses. 37.9% of the respondents had participated in other professional development activities in the previous 6 months.

Participants also had the opportunity to indicate what they liked most and least about the program. 82.4% wrote something in this category with several themes emerging. The percentage of participants who fit into each category, not being mutually exclusive, is summarized in *Table 25*. There was very good agreement between the two raters,  $\kappa = .893, p < .0005$ :

Table 25

*What Participants Liked Most about the EI program*

<b>Theme</b>	<b>Percent of participants who fit this theme (n = 29)</b>	<b>Example</b>
Skills practice/skills learning	51.7	“specific strategies to use in real situations; great meditation strategies & workshops”
General participation/learning	24.1	“taking part in a useful professional development program EI learning about EI”
Self-Reflection	10.3	“The way that it served as a marker of life to actually start concentrating on these important issues”
Learning from Others	13.8	“Touching base with other teacher candidates during practicum + hearing others examples”
Lecturer	10.3	“good presenter, good analogies & examples”
Group Discussion	6.9	“I enjoyed the small group and large group discussion as I learned more during these group discussions.”
Normalization	3.4	“how we can practice EI in our daily lives. Hearing what makes other classmates stressed”

79.4% (N = 27) of the participants provided examples of what they liked least in the program, with the most common theme mentioning the amount of homework. However, of the 37% who specified homework, many noted that they understood the importance of it as part of the program. There was very good agreement between the two raters,  $\kappa = .855, p < .0005$ :

“homework, even though I gained a lot from doing it”

“The homework, but I recognize its importance in the study! ;-)”

The remaining responses involved logistic complaints (18.5%) such as the timing of the sessions or the fact that the food provided did not meet dietary needs. 7.4% of the participants said there was nothing they did not like, and 11.1% noted that there was, on occasion, too much information presented at once. Another 7.4% specified that they would have liked more participation and 18.5% of the respondents mentioned a specific activity or dislike within one of the sessions, such as written exercises or finding it difficult to think of examples during self-reflection activities.

### **Interpretation of Participant Satisfaction**

Upon program completion, participant satisfaction was rated at over 90%. The sessions were generally reported as positive, with over 97% indicating that they would recommend the program to others. The feedback questionnaire also indicated that the session that taught emotional awareness of others, reasoning, and management of self and others, was the most helpful, with almost the same number of participants claiming more than one session to be equally as helpful. Specifically, the survey results indicated that the participants positively experienced learning about and practicing skills, participating in general learning from the session leaders and from their colleagues in class, and engaging in self-reflection and group discussion. Additionally, individuals commented on sharing with classmates, learning from others, making personal changes, the efficacy of the presenter, and the group atmosphere.

### **Phase 2 and 3 Implications**

This process evaluation was conducted to ensure each step of the program’s implementation so that its outcomes could be attributed to the program itself. Generally, following the causal model, it is evident that each step described in the theory section was completed by the majority of participants. It can be concluded that the program was implemented with fidelity, that most individuals both participated in the program and understood its components, and as well, engaged in the application of the skills they learned.

It is also important to note the “non-completers” of the program. In the current study, 33% of the participants did not complete homework activities for some weeks; for other weeks

this was less than 5%. This fact highlights one of the common difficulties often seen in group programs, one of homework compliance (Tomkins, 2002). This result emphasizes the importance of supervising individuals closely and providing support through a series of checks and balances. Progress monitoring has recently become a focus in clinical practice (Ionita & Fitzpatrick, 2014). Further, when high stress is present, variability in compliance frequently exists, with some participants requiring stronger external motivation to aid with completion. Higher levels of monitoring in such programs would aid activity compliance and prevent dropout.

While one cannot follow each participant through stages of the causal model, the evaluator in this study did have the opportunity to provide evidence regarding program implementation. The majority of participants were present for at least four of the five sessions; five of the seven skills were salient when participants were asked about what they learned, and all participants engaged in at least some form of skills application. Additionally, the majority of participants was satisfied and gave positive feedback at the completion of the program. While some individuals did not complete all required program components, the majority of participants was engaged in all required components, and hence general changes in program outcomes are most likely attributable to the program. A more detailed understanding of how the process evaluation relates to the outcomes such as theoretical contributions of self-reflection, practice, and self-efficacy, as well as speculations regarding the contribution of specific EI facets, are discussed in the general discussion below.

### **Phases 2 and 3 Study Limitations**

Though this study is built upon a strong program theory and evaluated on both process and outcomes, there are a number of limitations. The low power as a result of a small sample size may have influenced the lack of statistical significance seen in some of the outcomes. Future studies using larger samples are needed to replicate the effects reported here. In addition, self-report measures should not be solely relied upon since they are prone to social desirability and other reliability fluctuations (Schwartz, 1999). Short scales (E.g., SWL) and shortened versions of existing longer scales were also employed which might have affected both reliability and validity (e.g., TSES). Further, participants were a self-selected sample, and despite the notion that individuals thought they were being assigned randomly to control or program groups, individuals were categorized according to their availability. The control group was given the

option of program participation upon session completion. This was only the case for three members of phase two. Additionally, given that individuals came from the same cohort, it is plausible that there was contamination across conditions that impacted the scores from the control group. Though groups that entered the EI program at different points in the year (October versus January) showed no significant differences between groups on each variable at the beginning of the program, it is possible that the workload at different times of year varied and thus impacted stress levels and hence the results (i.e., practicum placements were at the beginning of one of the EI workshops and the middle/end of the other). Relatedly, this might have contributed to high dropout rates, which future studies should examine with regard to differences between completers and non-completers.

The process evaluation also has a number of limitations, many of which are related to the limitations of collecting qualitative data. The partial-completion of handed-in material on the part of some participants is considered problematic given the small sample, thus increasing difficulty in assessing program implementation. This problem was also exacerbated by the fact that some individuals failed to write down their activities despite having completed them. The notion that participants had a choice as to the skills they wanted to practice weekly, while being beneficial for motivation, increased the difficulty of assessing understanding and practice of each of the seven EI facets as some were overrepresented in the homework and varied between individuals. Relatedly, some of the facets were less represented due to the fact that they may lend themselves less to “skills practice” (e.g., emotional awareness of others). Further, given that multiple measures were used as proxies for the outcomes, responses were coded, which for some outcomes, such as categorization into EI facets, proved to be quite complex. Though measuring the level of mastery was attempted, this yielded data that was not amenable to a profitable discussion. This should be assessed weekly and by each skill practiced as opposed to time practiced. Lastly, it is imperative to re-state that the causal model presented in this study is a simplified model; it requires further statistical analysis in identifying how specific mechanisms lead to specific outcomes. More theoretical implications and speculations with regard to the results seen in the process evaluation and their relation to the outcomes in all three phases of this research will also be discussed in the general discussion.

## Funding

The research studies in Chapters 4 and 5 of this dissertation were funded by the Social Sciences and Humanities Research Council of Canada.

## References

- Astbury, B., & Leeuw, F.L. (2010). Unpacking black boxes: Mechanisms and theory building in evaluation. *American Journal of Evaluation*, 31, 363-381. doi: 10.1177/1098214010371972
- Barnett, P. A., & Gotlib, I. H. (1988). Psychosocial functioning in depression: Distinguishing among antecedents, concomitants, and consequences. *Psychological Bulletin*, 104, 97-126.
- Brackett, M. A., Palomera, R., Mojsa-Kaja, J., Reyes, M. R., & Salovey, P. (2010). Emotion-regulation ability, burnout, and job satisfaction among British secondary school teachers. *Psychology in the Schools*, 47, 406-417.
- Brackett, M. A., Rivers, S. E., & Salovey, P. (2011). Emotional intelligence: Implications for personal, social, academic, and workplace success. *Social and Personality Psychology Compass*, 5, 88-103.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385-396. <http://dx.doi.org/10.2307/2136404>.
- Creswell, J. W., Hanson, W. E., Clark, V. L., & Morales, A. (2007). Qualitative Research Designs: Selection and implementation. *The Counseling Psychologist*, 35, 236-264. Doi: 10.1177/0011000006287390
- Delbecq, A. L., & Van de Ven, A. H. (1971). A group process model for problem identification and program planning. *The Journal of Applied Behavioral Science*, 7(4), 466-492.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75.
- Doran, G. T. (1981). There's a S.M.A.R.T. way to write management's goals and objectives. *Management Review*, 70(11), 35-36.
- Dusenburg, L., & Albee, G. W. (1988). Primary prevention of anxiety disorders. In C. G. Last & M. Hersen (Eds.), *Handbook of anxiety disorders* (pp. 571-583). New York: Pergamon

Press.

- Endler, N. S., & Parker, J. D. (1990). Multidimensional assessment of coping: a critical evaluation. *Journal of personality and social psychology*, 58(5), 844.
- Endler, N. S., & Parker, J. D. (1994). Assessment of multidimensional coping: Task, emotion, and avoidance strategies. *Psychological assessment*, 6(1), 50.
- Endler, N. S., & Parker, J. D. (1999). CISS: Coping inventory for stressful situations. MHS.
- Estabrook, K., & Christianson, H. (2013). Medical Student Healthcare Barriers and Solutions: Perspectives of Students. *Academic Psychiatry*, 37(4), 283-284. Doi: 10.1016/j.explore.2015.02.003
- Friedman, V. J. (2001). Designed blindness: An action science perspective on program theory evaluation. *American Journal of Evaluation*, 22(2), 161-181.
- Friedman, E. S., Thase, M. E., & Wright, J. H. (2008). Cognitive and Behavioral Therapies. In A. Tasman, J. Kay, J. A., M. B. First, & M. Maj (Eds.), *Psychiatry Third Edition* (pp. 1920-1947). New Jersey: John Wiley & Sons, Ltd.
- Gardner, L. (2005). *Emotional intelligence and occupational stress* (Unpublished dissertation). Swinburne University of Technology, Hawthorn, Australia.
- Gardner, L., Stough, C., Hansen, K. (2008). *Managing Occupational Stress through the development of Emotional Intelligence*. Professional Development Program for Teachers. Swinburne, Australia.
- Gardner, R. C. & Tremblay, P. F. (2006). *Essentials of Data Analysis. Theory and Computer Applications*. Printed by the University of Western Ontario Book Store.
- Gignac, G. E. (2008). *Genos Emotional Intelligence Inventory: Technical Manual*. Sydney, NSW. Genos Press.
- Glass, G. V., Peckham, P. D., & Sanders, J. R. (1972). Consequences of failure to meet assumptions underlying the fixed effects of analysis of variance and covariance. *Review of Educational Research*, 42, 237-288.
- Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis*, 11, 255-274.
- Grembowski, D. (2001). *The Practice of Health Program Evaluation*. Thousand Oaks, CA: Sage.
- Hardeman, W., Griffin, S., Johnston, M., Kinmonth, A.L. and Wareham, N.J. (2000)

- Interventions to prevent weight gain: a systematic review of psychological models and behaviour change methods. *International Journal of Obesity and Related Metabolic Disorders*, 24, 131–143.
- Hardeman, W., Johnston, M., Johnston, D.W., Bonetti, D., Wareham, N.J. and Kinmonth, A.L. (2002) Application of the theory of planned behaviour in behaviour change interventions: a systematic review. *Psychology and Health*, 17, 123–158.\*
- Howells, K., Day, A., Williamson, P., Bubner, S., Jauncey, S., Parker, A., & Heseltine, K. (2005). Brief anger management programs with offenders: Outcomes and predictors of change. *The Journal of Forensic Psychiatry and Psychology*, 16, 296-311.
- Huppert, F. A., & Johnson, D. M. (2010). A controlled trial of mindfulness training in schools: The importance of practice for an impact on well-being. *The Journal of Positive Psychology*, 5(4), 264-274.
- Ionita, G., & Fitzpatrick, M. (2014). Bringing science to clinical practice: A Canadian survey of psychological practice and usage of progress monitoring measures. *Canadian Psychology/Psychologie Canadienne*, 55(3), 187.
- Karahan, T. F., & Yalcin, B. M. (2009). The effects of an emotional intelligence skills training program on anxiety, burnout and glycemic control in type 2 diabetes mellitus patients. *Turkiye Klinikleri Journal of Medical Sciences*, 29(1), 16-24.
- Kariv, D., & Heiman, T. (2005). Task-oriented versus emotion-oriented coping strategies: the case of college students. *College Student Journal*, 39(1), 72.
- Kotsou, I., Nelis, D., Gregoire, J., & Mikolajczak, M. (2011). Emotional Plasticity: Conditions and Effects of Improving Emotional Competence in Adulthood. *Journal of Applied Psychology*, 96(4), 827-839. doi: 10.1037/a0023047
- Kirk, R. E. (1995). *Experimental design: Procedures for the behavioral sciences*. (3rd ed). Pacific Grove, CA: Brooks/Cole.
- Lieblich, A., Tuval-Mashiach, R., & Zilber, T. (1998). *Narrative research: Reading, analysis, and interpretation*. Thousand Oaks, CA: Sage
- Linehan, M. S. (2014). *DBT Skills Training Manual*. New York: Guilford Press.
- Linehan, M., Bohus, M., & Lynch, T. R. (2007). Dialectical Behavior Therapy for Pervasive Emotion Dysregulation. In Gross, J. (Ed.) *Handbook of Emotion Regulation*, Guilford Press, New York, 581-605.



- Lipsy, M. W. (1993) Theory as method: Small theories of treatments. *New Direction in Program Evaluation*, 57, 5-38.
- Myers, J. L., & Well, A. D. (1991). Research design and statistical analysis. NY: Harper-Collins.
- Mezirow, J. (1981). A critical theory of adult learning and education. *Adult education quarterly*, 32(1), 3-24.
- Millet, W. R., & Rollnick, S. (1991). *Motivational interviewing*. New York: The Guilford Press.
- Nelis, D., Kotsou, I., Quoidbach, J., Hansenne, M., Weytens, F., Dupuis, P., & Mikolajczak, M. (2011). Increasing Emotional Competence Improves Psychological and Physical Well-Being, Social Relationships, and Employability. *Emotion*, 11(2), 354-366. doi: 10.1037/a0021554
- Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences*, 47, 36-41.
- Parker, J. D. A., Hogan, M. J., Eastabrook, J. M., Oke, A., & Wood, L. M. (2006). Emotional intelligence and student retention: Predicting the successful transition from high school to university. *Personality and Individual Differences*, 41, 1329-1336.
- Poole, J., & Saklofske, D. H. (2009, June). *Increasing teacher efficacy and coping: An emotionally intelligent approach*. Paper presented at the Canadian Psychological Association Conference, Montreal, Canada.
- Prochaska J. O., DiClemente, C. C., Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *Am. Psychol*, 47, 1102-1114
- Palmer, B. R., & Stough, C. (2001) *The Swinburne University Emotional Intelligence Test (SUEIT) technical manual*. Organizational Research Unit: Swinburne University of Technology.
- Prince-Embury, Saklofske and Nordstokke, (2013). *Resiliency scales for children and adolescents – trial version*. (San Antonio, TX: Harcourt).
- Rosenbaum, D. A., Carlson, R. A., & Gilmore, R. O. (2001). Acquisition of intellectual and perceptual-motor skills. *Annual review of psychology*, 52(1), 453-470.
- Saklofske, D. H., Austin, E. J., Mastoras, S. M., Beaton, L., & Osborne, S. E. (2012). Relationships of personality, affect, emotional intelligence and coping with student stress and academic success: Different patterns of association for stress and success. *Learning and Individual Differences*, 22, 251-257.

- Sharif, F., Rezaie, S., Keshavarzi, S., Mansoori, P., & Ghadakpoor, S. (2013). Teaching emotional intelligence to intensive care unit nurses and their general health: a randomized clinical trial. *Int J Occup Environ Med*, 4(3), 141-148.
- Schwarz N. (1999). Self-reports: how the questions shape the answers. *Am Psychol.*, 54(2), 93–105.
- Slaski, M., & Cartwright, S. (2003). Emotional intelligence training and its implications for stress, health and performance. *Stress and Health*, 19(4), 233-239.
- Shapiro, S. L., Astin, J. A., Bishop, S. R., & Cordova, M. (2005). Mindfulness-based stress reduction for health care professionals: results from a randomized trial. *International Journal of Stress Management*, 12(2), 164.
- Stough, C., Saklofske, D. H., & Parker, J. D. A. (2009). A brief analysis of 20 years of emotional intelligence: An introduction to assessing emotional intelligence: Theory, research, and applications. In C. Stough, D. H. Saklofske & J. D. A. Parker (Eds.), *Assessing emotional intelligence: Theory, research, and applications* (pp. 3-8). New York, NY: Springer. doi:10.1007/978-0-387-88370-0\_1
- Taylor, S., Woody, S., Koch, W.J., McLean, P., Paterson, R.J., & Anderson, K.W. (1997). Cognitive restructuring in the treatment of social phobia. *Behavior Modification*, 21, 487–511.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- Tompkins, M. A. (2002). Guidelines for enhancing homework compliance. *Journal of clinical psychology*, 58(5), 565-576.
- Vesely, A. K., & Saklofske, D. H. (2013). *Managing Occupational Stress through the development of Emotional Intelligence*. Program changes to the Professional Development Program for Teachers. London, Ontario.
- Vesely, A. K., Saklofske, D. H., & Nordstokke, D. W. (2014). EI training and pre-service teacher wellbeing. *Personality and Individual Differences*, 65(0), 81-85. doi: <http://dx.doi.org/10.1016/j.paid.2014.01.052>
- Vingilis, E., Forchuk, C., Orchard, C., Shaw, L., King, G., McWilliam, C., ... & Osaka, W. (2011). Development, Implementation, and Formative Evaluation of Pre-licensure Workshops Using Participatory Action Research to Facilitate Interprofessional, Client-

- Centered Mental Healthcare. *Journal of Research in Interprofessional Practice and Education*, 2(1), 25-48.
- Wong, C. S., Wong, P. M., & Law, K. S. (2007). Evidence on the practical utility of Wong's emotional intelligence scale in Hong Kong and Mainland China. *Asia Pacific Journal of Management*, 24, 43-60.
- Weiss, C. H. (1972). *Evaluation*. Upper Saddle River, NJ: Prentice Hall.
- Yalcin, B. M., Karahan, T. F., Ozcelik, M., & Igde, F. A. (2008). The effects of an emotional intelligence program on the quality of life and well-being of patients with type 2 diabetes mellitus. *Diabetes Educator*, 34(6), 1013-1024.
- Zeidner, M., Matthews, G., Roberts, R. D., & MacCann, C. (2003). Development of emotional intelligence: Toward a multi-level investment model. *Human Development*, 46, 69-96.

## Chapter 6

### General Discussion

Building from the existing evidence that emotional intelligence (EI) can be developed through EI training (e.g., Ciarrochi et al., 2007; Kotsou et al., 2011; Nelis et al. 2009; 2011; Slaski & Cartwright, 2003), this dissertation aimed at further unpacking the possible mechanisms through which such training leads to increases in EI and thus positively impacts a range of psychological outcomes in a group of pre-service teachers. Despite empirical support for EI training programs, many of the existing studies have been criticized for their lack of clear theoretical or methodological rationale, dearth of detail regarding training content, or limitations to their research design (Kotsou et al., in press). The objectives of this dissertation involved replicating this impact of training on EI, assessing additional psychological outcomes, and in addition, assessing the implementation such that the potential "how and why" of these changes could be explored. The studies discussed here provide further evidence of the valuable impact of EI training on workplace wellbeing outcomes. Further, though these present studies do not statistically link processes to outcomes and therefore do not claim with certainty the existence of specific causal mechanisms, the results from the process evaluation do allow for conjecture regarding possible pathways by which change could have occurred, which are worth investigating in future research.

### Further Evidence for EI Training

The results of all three phases of EI program administration indicated an increase in self-perceived emotional intelligence above and beyond what could be attributed to the passage of time, as seen by comparison to a control group. Similarly, improvements were generally seen in self-reported teacher efficacy for all phases. The mastery subscale of resilience showed increases across time (only measured in phase one). The coping inventory, measuring three types of coping in phases two and three, showed increases in the adaptive type - task-oriented coping - over time. Contrary to predictions, satisfaction with life and stress did not show uniform changes over time, across studies. Stress showed significant decreases, but only at one-month follow up in phases two and three. Life satisfaction also only showed significant increases in phases two and three. These mixed findings will be discussed subsequently. It is noteworthy that some of the improvements are trending as opposed to significant, possibly due to the limitation of low power

from small sample sizes, however, those discussed are in the predicted direction. Further, even without significance, effect sizes are most often above 10%, matching the mean effect sizes deemed to have practical significance in a recent meta-analysis of socio-emotional interventions (Durlak et al., 2011). These improvements provide further evidence that EI training is beneficial for teachers-in-training and that it can improve EI in addition to psychological wellbeing outcomes at post-program and, in some cases, at follow up. Given that phases two and three of program administration also employed a process evaluation in order to ensure that outcomes could, indeed, be attributed to the program itself, the following sections will integrate the implications of the outcomes from all phases of administration with the processes that took place throughout workshop sessions.

### **Program Implications: How did it work?**

The mixed methods design of this comprehensive program evaluation allowed the researcher to utilize the qualitative data to aid the interpretation of quantitative results. The outcomes of each phase point to the benefit of EI training for the management of stress and improvement of various aspects of psychological wellbeing. As such, the patterns observed through training activities can inform how such changes might be taking place. Having assessed each of the stages of the causal model, it has been determined that the steps proposed, namely implementation with fidelity, participation in and understanding of program components, and application of the skills learned, were completed by the majority of participants. Additionally, participants' responses at each stage of training and their patterns of completion, understanding, and application, may further aid in the understanding of how the training has led to post-program outcomes. The evaluation suggests that a number of processes may contribute to the trajectory toward post-program outcomes. In combination with steps of the casual model, the analyses here highlight three salient pathways that could be important in order for individuals to benefit from the components of the program, specifically those related to self-reflection, skills practice, and self-efficacy.

### **Possible Explanatory Mechanisms**

#### **Self-Reflection as a Possible Pathway**

Assuming that participation and engagement are present, the notion of self-reflection appears to hold great importance in the process of EI skills acquisition. Literature on teaching

performance outcomes have long recognized the significance of self-reflection in effective teaching in general (Stronge, 2007), but especially for the professional growth and development of pre-service teachers during teacher-training. This is often seen through changes made to pedagogical dimensions, such as curriculum planning and classroom management (Hatton & Smith, 1995; Kong, 2010). Additional self-reflection activities were included in the present program in order to increase understanding of EI skills as they impact the individual participant. In this case, self-reflection differs only slightly from the EI skill 'emotional self-awareness (ESA)' in that it suggests a more general awareness of existing behaviors and the opportunities for change, and refers to the broad but active action of noticing and interpreting one's thoughts, feelings, and behaviors and utilizing this to inform future thoughts, feelings, and behaviors (or performance). As described above, this might mean recognizing personal triggers that create strong emotional reactions such that one may work on a solution. This is distinct from ESA as self-reflection can be goal-oriented, whereas ESA reflects more the attentiveness to and recognition of emotions (example items from the Genos Inventory: "I am aware of when I am feeling negative" or "I find it difficult to identify my feelings on issues") though this may be merely a matter of operational definition.

In addition to the reflection paragraphs filled out by participants, activities of the original program already involved self-reflection, though they were not defined that way by the author. For example, Gardner (2005) cites activities, such as 'recognizing triggers,' to hold empirical support for improving skills such as emotional management and self-control. This implies that an element of introspection is required in order to make a change to behavior. Examination of the reflection paragraphs shows that the majority of individuals relate the knowledge learned in the workshop to their personal experience and then utilize this information to inform other components such as goals and practice. In other words, it appears that this self-evaluation piece is a step between understanding the material taught in the workshop and beginning to effectively apply this knowledge. This is consistent with clinical literature in which self-reflective and insight-enhancing techniques are utilized as a path to behavior change in therapeutic contexts for various mental health difficulties (Kristeller & Hallet, 1999; Shapiro, Schwartz, & Bonner, 1998; Teasdale, Segal, & Williams, 1995). Responses from homework sheets within the process evaluation seem to reinforce the contribution of self-reflection to the acquisition of EI skills. The themes yielded from the analyses of reflection paragraphs, showed that the majority of

participants had an openness and willingness to introspect, which preceded the implementation of skills practice. Further, being given the opportunity to receive feedback on their EI profile was an element of the program aimed at increasing participant awareness (Gardner, 2005). In line with this, some participants noted that they felt negatively toward their EI profile results, but recognized X or Y as an example of how it might be true, and then planned a relevant goal/practice for the following week. Though this trajectory cannot be established for each individual, it might be considered that those who reacted to their EI profile with a defensive attitude, despite demonstrating an understanding of said EI skills, might not have engaged in a self-reflective step. In this case, need for improvement would not be recognized and one could reason that these are the individuals who failed to practice or that their skill application was in vain since the core of the ‘problem’ was not acknowledged. Noteworthy is the emphasis of self-reflection in relation to the ‘self’ EI skills in the current program, and thus possibly a stronger link to outcomes that reflect a self-focus. The observation of self-reflection or ‘personalizing EI information’ seems to be a theoretically necessary part of EI skills acquisition and suggests it is a possible intermediary step between understanding and application of EI knowledge.

### **Practice as a Possible Pathway**

An increase in general EI total and facet scores across time combined with verification that all participants engaged in some form of EI skills application throughout the program suggests potential impact of practice on outcomes. Results seem to enhance the evidence that supports practice as a pathway to a wide range of skill acquisition (Howells et al., 2005; Huppert & Johnson, 2010), reinforcing that this may also be the case for EI skills. The likely contribution of skills application to EI improvement, already part of the causal model in *Figure 2*, is consistent with previous theoretical explanations (and controversy) surrounding the construct of EI. These argue that EI is comprised of both declarative and procedural components requiring practice in order to strengthen the link between these two types of knowledge (Fiori, 2009; Mikolajczak, 2009). The idea is that individuals in the early stages of acquisition might have good knowledge (understanding) without being good executors (Fiori, 2009). Responses to individual EI profiles, received in session two of the workshop, exemplified that participants’ may be in these stages of early EI acquisition, seen by emerging themes of recognition of the need for practical improvement. Later weeks showed increasing percentages of themes on improvement, success, and mastery, in relation to skill practice of the week or within reflection

paragraphs. In addition, there were overall increases in the amount of time and number of skills practiced across weeks.

It was previously noted that the amount of practice for the acquisition of skills might vary by individual (Rosenbaum, Carlson, & Gilmore, 2001). Though one might argue that a range of individual differences such as previous learning or professional development (e.g., meditation to enhance emotional self-awareness) could change the degree of this requirement, one can argue it may also be linked to self-reflection. Specifically, that engaging in more self-reflection might make application of skills more effective because one is aware of its effectiveness at each stage. In other words, one may speculate that self-reflection and practice may have a bi-directional relationship in that practice aids further introspection, which, in turn, enhances the impact of the practice. This would imply a parallel relationship between self-reflection and practice, adding to the complexity of the sequential explanation given above. For example, someone who has previously engaged in significant amounts of therapy might have a higher level of insight into his behaviors and thus be able to make changes to his skill practice more quickly. Following from the previous section, this would imply that in order to gain procedural knowledge or become skillful in an EI domain, one must practice, which requires both declarative general EI knowledge and personal introspection of one's own EI. Having to build on declarative knowledge in addition to the exchange between practice and self-reflection, further support the notion mentioned earlier suggesting an 'incubation period' or period of time that is necessary before skills are effective. This is compatible with observations where stress reduction is only seen after one-month post-program as opposed to immediately upon program completion. It is also consistent with the continuing increase of Genos EI and sense of mastery subscale of resilience between pre-, post-, and one-month follow-up. Further questions regarding consistency of practice in general, how this may impact outcomes, and practice of skills related to specific EI facets are addressed in the future directions section.

### **Self-Efficacy as a Possible Pathway**

It is plausible that some increases in perceived EI may be attributable to higher self-efficacy after program completion. The self-efficacy theory (Bandura, 1986), involving the understanding of how skills are applied, and having these then strengthened by experience and feedback, would argue that improving knowledge about EI facets and how these apply to the



individual would improve teachers' confidence in using such skills. Practice, of which there is some evidence for each participant, would have then aided in this development.

The program itself was particularly aimed at assessing perceived self-efficacy of EI. The very increase in self-reported EI speaks to improved EI self-efficacy. This is congruent also with the increase in teacher efficacy and the delayed decrease in stress seen in the outcome evaluation. As described in the literature review, though one must acknowledge the notion that these self-report ratings do not necessarily result in the same "objective" abilities that are captured by measuring competence with performance measures externally, self-efficacy is a legitimate pathway, which can add incrementally to the prediction of positive wellbeing variables (Keefer, 2015). For example, belief in one's competence to regulate one's own emotions has shown to result in individuals who are better socially and emotionally adjusted than those who feel less confident in their aptitude to do so (Alessandri, Vecchione, & Caprara, 2015). As a strong predictor of behavior, self-efficacy is likely linked to other pathways such as practice and self-reflection, increasing their likelihood of occurring and thus resulting in higher motivation to achieve competence that would be considered more "objective."

Though it is not possible through this study to identify the amount of improvement resulting from self-efficacy specifically, it can be seen, and has previously been argued to be, a powerful motivator for change. This sense of confidence may be relevant to various domains of behavior, in the case of this dissertation, outcomes include those related to wellbeing (i.e., coping, stress, resilience) as well as to perceived performance (teacher efficacy). Here, there may be a distinction between skills focused on the self versus those that involve others. Though these skills influence one-another, one may differ in effectiveness with regard to oneself (e.g., keeping calm in the classroom) versus with regard to others (e.g., ability to teach academic material). This notion is more complex and will be further discussed below in relation to EI.

### **Note on Stress, EI, and Coping**

In the above studies, stress did not show a significant decrease in phase one, and only reached a significant decrease at one-month follow-up in the next phases. Further, task-oriented coping, a type of coping in which the individual is problem-focused, increased significantly across time points, as did EI (with the exception of 6-month follow-up in some cases). These results support the current literature looking at pathways between EI, stress, and coping. EI and

coping have shown to combine to mediate the effects of personality on stress (Austin, et al., 2010; Saklofske, et al., 2012), implying the importance of developing emotional competencies in improving personal coping strategies (Downey et al., 2010). Further, recent research on EI and physical health has shown that when individuals are high on trait EI, they are *less reactive* to stress as measured via salivary cortisol (Mikolajczak, Roy, Luminet, Fillée, & de Timary, 2007) and heart rate variability (Laborde, Brüll, Weber, & Anders, 2011). Other studies concur, showing that high trait EI individuals appraise stressful situations as a challenge rather than a threat, specifying that these individuals show higher self-efficacy to cope (Laborde et al., 2011; Mikolajczak, & Luminet, 2008). One could also interject a corresponding interpretation that individuals are engaged in problem-focused coping; those who have higher EI are in tune with their emotions and thus engage in cognitive re-evaluation and action in order to decrease stress (Keefer, Saklofske, & Parker, 2009). If individuals are in the process of learning new skills, such as through EI training, the period processing and practicing some of these skills in real-life situations could be considered on the same level of task-oriented coping, possibly with some extra time for acquisition. Perhaps this is therefore not a comment on having more or less stress, but on how higher EI, and in turn, more adaptive coping, might help to deal with stress effectively. This further suggests that the onus be placed on using EI to manage stress as opposed to placing focus on the mere experience of stress.

### **Other Considerations and Future Directions**

There are a range of considerations that have arisen as a result of limitations from this study as well as those that are associated with the controversy surrounding the definition and measurement of the EI construct.

One main point of contention that concerns their combination is the breakdown of the seven EI facets taught in the EI training. The lack of specification of the Genos EI theoretical model regarding how the facets interact with one another, allows only for speculation as to the impact the facets have on one another (Gignac, 2008; Palmer & Stough, 2001). It also raises questions about interpreting the significant increase of almost all EI facets despite the results from the process evaluation that show the dominance of emotional self-awareness (ESA) and emotional self-management (ESM) as the most-practiced; ESA, ESM, emotional awareness of others (EAO), and emotional self-control (ESC) as generally most-mastered; ESA, ESM, EAO,

and ER as represented most in reflections and goal-setting; and all of the self-oriented facets most saliently understood when asked about ‘significant thing learned’ by session. One explanation could lie simply in problems with measurement, namely that the individual EI facets are so highly correlated (see *Table 9*), that the outcomes are not discriminated. An alternative contributing factor could be the simultaneous activation of multiple facets, such that if one is practiced, this will also have an impact on other related facets. This is easily illustrated by taking an action and attempting to identify the facet under which it is categorized. For example, in order to ‘decide to wait to express your opinion to someone who has upset you until you are calmer,’ you must stop yourself from reacting (ESC), be aware of the fact that you are not calm and recognize (ESA) that you would express yourself more effectively (ER; EE) when in a calmer state. EI skills are most often used practically in combination with one another. Despite the fact that some of the skills used to increase certain facets *could* be improved in isolation, such as mindfulness practice to increase ESA, these same skills could be utilized to aid outcomes associated with other facets, such as mindful breathing to aid in ESC. This is strongly supported in the assertion of self-reflection as a possible pathway.

Previous literature has shown evidence contrary to the notion that EI facets are specifically hierarchical (Fiori & Antonakis, 2011; Rossen et al.; 2008), however, the interaction between facets is not fully understood. One attempt at partial explanation is that of the categorization between EI facets related to the self versus the other (Mikolajczak, 2009). Such categorization would imply that improvement in one of the skills related to the self (i.e., ESA, EE, ER, ESM, & ESC) would aid in the improvement of some or all of the others. For instance, being aware of one’s anger can help to better manage and control it. Such would be similar for EAO and EMO. This does not imply that self-skills do not impact others-skills, but merely that they are comprised of different skillsets. Looking at the specific EI facets in the outcome evaluation, all self-EI facets increased despite the visible practice of only some, whereas in the others category, only EAO improved. This not only provides evidence of the distinction between self and others skills, but also speaks to the notion that a) the program was very self-focused and b) when a skill was taught, it seemed to improve. Specifically, the program emphasized the practice related to self-EI skills such as mindfulness and cognitive-restructuring, activities that did not require recruitment of another. Though this is partially because ‘others’ skills lend themselves less easily to practice, a limitation in design and practicality, this provides a measure

of discriminant validity in that it shows that the skills trained were the ones that increased. The increase of EAO, though not present as a facet that was practiced, came up in the ‘most-mastered’ section, was mentioned as salient a number of times throughout the workshop session, and could also have increased due to higher self-efficacy as a result of new knowledge in this domain.

### **How to Improve the Program and Evaluation**

In further consideration of program delivery and facilitation of learning, improvements to the EI training program here could include more specific activities catered to the improvements of EI ‘others’ skills EAO and EMO. In relation to all EI facets, an increase in monitoring could be added into each program session, such as longer periods of discussion around homework to remedy issues with understanding and to increase the likelihood of practice. Further checks could be included to motivate completion, and extra time could be given in-session to complete some of the homework activities. Additional prompts and activities involving self-reflection, with corresponding measures, may also aid in the increase of skills application and allow evaluators to follow this application more closely. Further program-related incentive to practice, given its positive impact on skill improvement, would also enhance acquisition of EI skills. There is need for continued association of the new EI-based knowledge and skills to one’s context – this applies to both personal and teaching situations – and increased session time for the internalization of these psychoeducational and skill-based aspects of the program.

Previous literature shows mixed results with regard to the longer-term improvement of EI skills. Some studies indicate that these changes may take time (Abe et al., 2013; Clarke, 2010; Gorgas et al., 2013), though the amount of time is unclear. This study showed maintenance of some of the EI and other outcome scores, but drop-off of others at 6-month follow up, the latter being consistent with maintenance difficulties of positive effects experienced by individuals engaged in Cognitive Behavioural Therapy for mental health difficulties such as depression (Hollon, Thase, & Markowitz, 2002). Though phases two and three collected data at 6-month follow-up, there was a large amount of dropout and phase one of this study only looked at scores at the one-month time point. Further longer-term follow-up time points are required to clarify this controversy and booster sessions to prompt skill practice may be useful (Whisman, 1990). Future studies should also use a performance measure to assess EI as an increase in EI self-perception may not necessarily result in an increase in EI competency (Keefer, 2015). A 360°

assessment of teacher EI would be most beneficial, recruiting self-ratings in addition to ratings from colleagues and students from the classroom.

### **Further Implications: The Next Steps**

Skill acquisition, especially for EI skills, which have often shown to be dependent on context (Zeidner et al., 2008; 2012), is a complicated progression and the above-discussed pathways are those that were salient when looking at the results of process and outcome evaluations of the EI program administrations. It is acknowledged that these are possible pathways that likely work in combination with other mechanisms of change, such as willingness (Linehan, 2014) and motivation (Millet, & Rollnick, 1991) as well as others not described here. The present studies looked at the rudimentary pieces of implementation and outcome; the causal pathways described (in *Figure 2*) remain to be tested statistically, but because it would necessitate a larger sample size, could not be implemented in the current research.

The preliminary exploration of processes have led to findings that could then inform theory-building and hypothesis testing with larger sample sizes. For example, further research may test whether those who practiced more, improved more, in line with what is expected by skill acquisition theories—or could control for the number of skills practiced in order to reveal which facet/skill or combination of skills predicted the greatest improvement in the range of outcomes. The other possible pathways discussed here could also be tested. For instance, measures from the process evaluation assessing self-reflection could be linked to EI and other outcomes. These types of analyses would aid the understanding of the role of different mechanisms in accounting for EI training effects as well as in determining the relationship between EI facets, discussed above.

Lastly, a final note on the theory of EI is called for. Upon reflection as to whether the results of the above studies support the ability or trait approach to conceptualizing EI, the answer is unclear. Theoretical approaches to trait EI would define it to be comprised of emotional self-perceptions located at the lower levels of personality hierarchies (Petrides & Furnham, 2001; Petrides, Pita, & Kokkinaki, 2007), implying a relatively stable characteristic. However, recent literature has shown trait malleability, namely that it is the behavior around these traits that have the capacity to change. Relatedly, other studies have shown certain traits to be activated by specific contexts, indicating once again, that trait-related behavior is malleable (Ashton, 2013).

On the ability side, though the definition lends itself easily to change, the notion that ability as it is currently measured reflects emotion knowledge only without encompassing a procedural component has been strongly argued (Fiori, 2009). Following from the results here, one may argue that EI begins as a base ability or trait (a foundational ‘characteristic’ with a possible range of expression), which then can potentially be improved through pathways, such as practice, resulting in a competency. This description is supported by Mikolajczak’s (2009) proposed tripartite model of EI, which draws a distinction between knowledge, ability to apply this knowledge, and the propensity to put one’s abilities into practice. Regardless, studies on each conceptualization of EI are complimentary, with both being relevant and helping us to further understand how each of EI self-perceptions and EI knowledge may predict relevant outcomes (Keefer, 2015). Though the terminology is still muddy, we are moving closer to more coherently comprehending the components of EI ‘competency,’ where it’s underlying foundation begins, and how it can be best assessed, improved, and maintained.

Inquiring about the particular mechanisms involved in the training of EI can help advance the field by allowing for the empirically-supported improvement of programs aimed at a range of populations. In the case of teachers, this competency is particularly important for their own psychological wellbeing as well as for the wellbeing and future of their students. The ultimate aim is to establish an empirically-based program that can be implemented into teacher education. The results here support the notion of EI as an avenue toward more adaptive coping, which in turn, helps individuals to manage stress more effectively and to be more efficacious in their occupation. These improvements may be only some of the many outcomes aided by EI that could benefit teachers in their paramount role to society.

### References

- Abe, K., Evans, P., Austin, E. J., Suzuki, Y., Fujisaki, K., Niwa, M., & Aomatsu, M. (2013). Expressing one's feelings and listening to others increases emotional intelligence: a pilot study of Asian medical students. *BMC medical education*, *13*(1), 82.
- Alessandri, G., Vecchione, M., & Caprara, G. V. (2015). Assessment of regulatory emotional self-efficacy beliefs: A review of the status of the art and some suggestions to move the field forward. *Journal of Psychoeducational Assessment*, *33*, 24-32.
- Ashton, M. (2013). *Individual differences and personality (2nd ed)*. San Diego: Academic Press.
- Fiori M. & Antonakis J. (2011). The ability model of emotional intelligence: Searching for valid measures. *Personality and Individual Differences*, *50*, 329-334.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Ciarrochi, J., Blackledge, J., Bilich, L., & Bayliss, V. (2007). Improving emotional intelligence: A guide to mindfulness-based emotional intelligence training. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 89-124). New York, NY: Psychology Press/Taylor & Francis.
- Clarke, N. (2010). The impact of a training programme designed to target the emotional intelligence abilities of project managers. *International Journal of Project Management*, *28*(5), 461-468. doi: 10.1016/j.ijproman.2009.08.004
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*, 405-432.
- Fiori, M. (2009). A new look at emotional intelligence: a dual process framework. *Personality and Social Psychology Review*, *13*, 21-44.
- Gardner, L. (2005). *Emotional intelligence and occupational stress* (Unpublished dissertation). Swinburne University of Technology, Hawthorn, Australia.
- Gardner, L., Stough, C., Hansen, K. (2008). *Managing Occupational Stress through the development of Emotional Intelligence*. Professional Development Program for Teachers. Swinburne, Australia.
- Gay & Kirkland, 2010
- Gignac, G. E. (2009). Psychometrics and the measurement of emotional intelligence. In

- Assessing Emotional Intelligence* (pp. 9-40). Springer US.
- Gorgas, D., Greenberger, S., & Way, D. (2013). A Brief Educational Intervention Designed to Affect Emotional Intelligence Score in Emergency Medicine Residents. *Annals of Emergency Medicine*, 62(5), S174. doi: 10.1016/j.annemergmed.2013.06.048
- Hatton, N., & Smith, D. (1995). Reflection in teacher education: towards definition and implementation. *Teaching and Teacher Education*, 11(1), 33–49.
- Hill, C. J., Bloom, H. S., Black, A. R., & Lipsey, M. W. (2008). Empirical benchmarks for interpreting effect sizes in research. *Child Development Perspectives*, 2, 172-177.
- Hollon, S. D., Thase, M. E., & Markowitz, J. C. (2002). Treatment and prevention of depression. *Psychological Science in the Public Interest*, 3, 39–77.
- Howells, K., Day, A., Williamson, P., Bubner, S., Jauncey, S., Parker, A., & Heseltine, K. (2005). Brief anger management programs with offenders: Outcomes and predictors of change. *The Journal of Forensic Psychiatry and Psychology*, 16, 296-311.
- Huppert, F. A., & Johnson, D. M. (2010). A controlled trial of mindfulness training in schools: The importance of practice for an impact on well-being. *The Journal of Positive Psychology*, 5(4), 264-274.
- Keefer, K. V. (2015). Self-Report Assessments of Emotional Competencies: A Critical Look at Methods and Meanings. *Journal of Psychoeducational Assessment*, 33, 3-23.
- Keefer, K. V., Parker, J. D., & Saklofske, D. H. (2009). Emotional intelligence and physical health. In *Assessing emotional intelligence* (pp. 191-218). Springer US.
- Kong, S. C. (2010). Using a web-enabled video system to support student–teachers’ self reflection in teaching practice. *Computers & Education*, 55(4), 1772-1782.
- Kotsou, I., Mikolajczak, M., Grégoire, J., Heeren & Leys, C. (in press). Improving emotional competence: A systematic review of existing work and future challenges. *Emotion Review*.
- Kristeller, J.L., & Hallett, C.B. (1999). An exploratory study of a meditation-based intervention for binge eating disorder. *Journal of Health Psychology*, 4, 357–363.
- Laborde, S., Brüll, A., Weber, J., & Anders, L. S. (2011). Trait emotional intelligence in sports: A protective role against stress through heart rate variability? *Personality and Individual Differences*, 51(1), 23-27.
- Linehan, M. S. (2014). *DBT Skills Training Manual*. New York: Guilford Press.



- Mikolajczak, M. (2009). Moving beyond the ability-trait debate: A three level model of emotional intelligence. *E-Journal of Applied Psychology, 5*, 25-31.
- Mikolajczak, M., & Luminet, O. (2008). Trait emotional intelligence and the cognitive appraisal of stressful events: An exploratory study. *Personality and Individual Differences, 44*(7), 1445-1453.
- Mikolajczak, M., Roy, E., Luminet, O., Fillée, C., & de Timary, P. (2007). The moderating impact of emotional intelligence on free cortisol responses to stress. *Psychoneuroendocrinology, 32*(8), 1000-1012.
- Millet, W. R., & Rollnick, S. (1991). *Motivational interviewing*. New York: The Guilford Press.
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality, 15*, 425-448. doi:10.1002/per.416
- Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology, 98*, 273-289. doi:10.1348/000712606X120618
- Rossen, E., Kranzler, J. H., & Algina, J. (2008). Confirmatory factor analysis of the Mayer-Salovey-Caruso emotional intelligence test V2.0 (MSCEIT). *Personality and Individual Differences, 44*, 1258-1269.
- Shapiro, S.L., Schwartz, G.E., & Bonner, G. (1998). Effects of mindfulness-based stress reduction on medical and premedical students. *Journal of Behavioral Medicine, 21*, 581-599.
- Slaski, M., & Cartwright, S. (2003). Emotional intelligence training and its implications for stress, health and performance. *Stress Health, 19*, 233-239.
- Stronge, J.H. (2007). *Qualities of effective teachers*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Teasdale, J.D., Segal, Z., & Williams, J.M.G. (1995). How does cognitive therapy prevent depressive-relapse and why should attentional control (mindfulness) training help? *Behaviour Research and Therapy, 33*, 25-39.
- Whisman, M. A. (1990). The efficacy of booster maintenance sessions in behavior therapy: Review and methodological critique. *Clinical Psychology Review, 10*(2), 155-170.
- Zeidner, M., Matthews, G., & Roberts, R. D. (2012). The emotional intelligence, health, and

well-being nexus: What have we learned and what have we missed? *Applied Psychology: Health and Well-being*, 4, 1-30.

Zeidner, M., Roberts, R. D., & Matthews, G. (2008). The science of emotional intelligence: Current consensus and controversies. *European Psychologist*, 13, 64-78.  
doi:10.1027/1016-9040.13.1.64

## Appendices

### Appendix A: Additional Tables

Table 26

*Program Component Descriptions and Examples*

<b>Program Component</b>	<b>Description</b>	<b>Example</b>
<i>Psychoeducation</i>	This component can also be termed the lecture component and involves teaching the group about a number of different topics related to stress, the construct of EI, coping, etc. In terms of format, a standardized set of slides is presented through each session where all slides are covered content-wise, but time spent on each slide depends upon class discussion, questions, and group involvement. The layout of content to be taught can be seen in more detail in <i>Table 26</i> .	E.g., educating the group on the nature of stress, how it is cumulative, and how one can assess one's stress balance.
<i>Education and Demonstration of coping skills</i>	Though most of the education on coping skills occurs in the first session, the entire five weeks involve application of coping skills to various situations in addition to demonstrating these to the class (facilitator) and asking some individuals to share and demonstrate their own skills for coping as well as discussing alternatives. One of the main points to get across here is that these techniques are, in fact, <i>skills</i> that require practice.	E.g., educate the class on the potential positive impact of breathing techniques on anxiety/stress; outline technique and demonstrate a few rounds of 'box breathing' to the class, displaying the objective to slow down ones breathing and lengthen each breath.
<i>Scenario discussions</i>	Scenario discussions surround the relevant content being taught during the respective session and will involve case studies to depict possible situations that exemplify encounters both in the classroom and some that are otherwise generalizable. Participants are asked to apply the 1-2-3 template taught or other skills learned within sessions to find and apply practical solutions to these exemplified stressors.	E.g., "AB is a 24 year old male who works in grade 5 classroom.... He lives an hour away from his workplace .... .... [sometimes has to do] lunchroom duty etc. ....He gets along well with his colleagues, but there is some tension with the school principal.... "
<i>Group Activities</i>	Group activities involve various exercises including group discussions, role play, video analysis, relation of each of the seven EI skills to specific situations, in addition to others	E.g., one activity in session 2 involves breaking up into groups (with each group assigned to a different EI skill)

	chosen by the group	and asking each group to identify one positive and one negative classroom scenario in which that assigned EI factor is relevant (also to discuss how the use of that skill was effective or ineffective).
<i>Homework</i>	Homework mostly involves practice, self-reflection, goal-setting, and workbook activities from the booklets provided. It asks participants to engage with the content taught within the previous session and relate this to their personal lives and teaching (in this case practicum) experiences.	E.g., one homework activity from session 3 asks individuals to come back the next week having identified three situations in which they, themselves, are the least self-aware and how they may increase awareness of their actions (i.e. what triggers a specific action and how can one be aware of the preceding feeling so as to avoid the negative action).
<i>Self-reflection</i>	The program aims to promote continuous self-reflection throughout other program components. Though this is difficult to monitor, it is an imperative aspect of learning EI skills and necessary for development of these skills. *Note: Any activity requiring the participants to assess how they would react in a given situation or to monitor their own thoughts, feelings, and actions would qualify under this category.	E.g., In week 2, participants are asked to spend 60 seconds considering how each of the EI skills relate to them and managing stress at work. They are then to take two minutes to: a) identify an EI strength, b) think of a new situation where they could demonstrate that strength, c) identify the one skill they feel they could develop to become more effective in their work, and d) determine behaviours related to that skill they could immediately demonstrate more frequently.
<i>Worksheets</i>	These worksheets are written mini-assignments (from the workbook) done in class that ask individuals to fill in both content and self-reflective material on the given topic of the moment. Some worksheets are also completed as homework and usually involve the application of each of the seven EI facets.	E.g., in session 1, individuals are asked to write out each of the seven EI facets and give examples of situations in which they may be applied.
<i>Goal-setting exercises</i>	Goal sheets are a form of planning in order to make the content more generalizable to outside	E.g., one exercise from session 3 asks participants to identify

	<p>the workshop. Individuals are asked to make changes to some aspect of their current routine and record various aspects of this including number of times completed and gradual steps.</p>	<p>the three EI-related things that they could either stop, start, or change over the next 30 days and for each activity consider: a) What they will do, b) How they will do it, c) what support they might need, d) how they will know if they have been successful (i.e., have clear, measurable goals where one can objectively answer if the goal was met).</p>
--	--	---

Table 27

*Session Overviews and Components Involved in Each Session*

Session Number	Content Covered	Components Involved
<p><b><u>Session 1:</u></b> <b>Introduction to program, overview of occupational stress and linking stress to the EI facets</b></p>	<ol style="list-style-type: none"> <li>1 Introductory Lecture               <ol style="list-style-type: none"> <li>a Stress is a subjective experience</li> <li>b The interpretation of the event is a critical part of the stress process</li> <li>c Stress balance – your stress level should match importance of situation triggering it</li> </ol> </li> <li>2 Teach skills to deal with occupational stress               <ol style="list-style-type: none"> <li>a Modify your environment</li> <li>b Modify your perceptions</li> <li>c Master other skills</li> </ol> </li> <li>3 Teach the three-step approach to stress management               <ol style="list-style-type: none"> <li>a Rate your stress level</li> <li>b Rate the relative importance of your stress</li> <li>c Evaluate your stress balance</li> </ol> </li> <li>4 Teach strategies for regaining balance (e.g., body-scan, breathing techniques, tense and relax muscles)</li> </ol>	<ul style="list-style-type: none"> <li>- psychoeducation</li> <li>- education and demonstration of coping skills</li> <li>- homework</li> </ul>
<p><b><u>Session 2:</u></b> <b>Overview of EI and understanding your EI</b></p>	<ol style="list-style-type: none"> <li>1 EI and Occupational Stress               <ol style="list-style-type: none"> <li>a EI is a set of skills related to emotions and processing emotional information</li> <li>b EI is significantly related to occupational stress</li> </ol> </li> <li>2 Introduction to EI</li> </ol>	<ul style="list-style-type: none"> <li>- psychoeducation</li> <li>- demonstration of coping skills</li> <li>- group activities</li> <li>- homework</li> <li>- self-reflection</li> <li>- worksheets</li> </ul>

	<ul style="list-style-type: none"> <li>a There are seven facets in the Swinburne /Genos EI model</li> <li>b EI can be developed</li> </ul> <p>3 Importance of having a plan and a feedback mechanism is crucial</p>	
<p><b><u>Session 3:</u></b></p> <p><b>Developing Emotional Self-Awareness, and Emotional Expression</b></p>	<ul style="list-style-type: none"> <li>1 The EI Facets <ul style="list-style-type: none"> <li>a Emotional Self-Awareness is the building block for other EI facets</li> <li>b Developing Emotional Expression is important for building trusting and cooperative relationships</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- psychoeducation</li> <li>- scenario discussions</li> <li>- group activities</li> <li>- homework</li> <li>- self-reflection</li> <li>- goal-setting</li> </ul>
<p><b><u>Session 4:</u></b></p> <p><b>Developing Emotional Awareness of Others, Emotional Reasoning, and Emotional Management (Self/Others)</b></p>	<ul style="list-style-type: none"> <li>1 The EI Facets Continued: <ul style="list-style-type: none"> <li>a Active listening is a critical skill for Emotional Awareness of Others</li> <li>b Emotional reasoning is imperative to more informed decisions and is a means of combining information and emotions together</li> <li>c Beliefs about events are the key to Emotional Self-Management</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- psychoeducation</li> <li>- scenario discussions</li> <li>- group activities</li> <li>- homework</li> <li>- self-reflection</li> <li>- worksheets</li> <li>- goal-setting</li> </ul>
<p><b><u>Session 5:</u></b></p> <p><b>Developing Emotional Self-Control &amp; Summary and plan to move forward</b></p>	<ul style="list-style-type: none"> <li>1 The EI Facets Continued: <ul style="list-style-type: none"> <li>a Boosting stress immunity improves Emotional Self-Control</li> <li>b Increase the length of your 'fuse'</li> </ul> </li> <li>2 Review of the above sessions with further, new, and reviewed activities</li> </ul>	<ul style="list-style-type: none"> <li>- scenario discussions</li> <li>- group activities</li> <li>- homework</li> <li>- self-reflection</li> <li>- worksheets</li> <li>- goal-setting</li> </ul>

Table 28

*Components of Original SSMP Program - Taken from Gardner (2005)*

<b>Exercise to be included in training program</b>	<b>Impacts which EI dimension?</b>	<b>Method of development</b>	<b>References</b>
Keep an emotional diary to document how you react to particular situations throughout the working day	ERE	Increases self-awareness	Slaski and Cartwright (2003)
Identify in given scenarios what triggers an emotional reaction in oneself	ERE	Increases self-awareness	Ashkanasay, Hartel et al. (2002) Howells et al. (2005)
Identify the emotions expressed in faces (non-verbal signals) and in movie clips (using verbal and non-verbal signals)	ERE UE	Increases self-awareness Increases empathetic accuracy Strengthens communication skills through learning to understand others verbally and non-verbally	Ashkanasay, Hartel et al. (2002) Flury and Ickes (2001) Rose and West (1999)
Attempt to put oneself in another's shoes by reading a given scenario and then noting down the emotional reaction to this scenario from different viewpoints	UE	Increases empathetic behaviour Develops the awareness of others viewpoints	Lau et al. (2004) Shapiro et al. (2004)
Learning to ask for feedback from colleagues (as to emotional displays) more often (through role play) and then using this feedback to understand oneself and modify one's emotional displays or behaviour if required	EM EC	Increases self-awareness Improves communication skills	Slaski and Cartwright (2003)
After learning to identify emotional triggers (see above), suggest alternative ways to respond to the given situations and identify the impact of these responses on one's own thoughts and behaviours and the impact on others in the workplace	ERE UE EM EC	Increases self-awareness Improves communication skills Improves ability to analyse impact of one's behaviour on others Enhances emotional regulation	Howells et al. (2005) Lau et al. (2004)

Note: ERE = Emotional Recognition and Expression; UE = Understanding Emotion; EM = Emotional Management; EC = Emotional Control

Note. The EI facets here refer to the 5-factor Swinburne model as it was developed before the change to the 7-factor model and hence has the old labels and abbreviations.

Table 29

*Description of and Rationale for Outcome Measures*

<b>Measure</b>	<b>Description</b>	<b>Rationale</b>
<i>Demographics Questionnaire (DQ)</i>	<p>The DQ is a brief questionnaire asking about basics characteristics such as age, sex, gender, previous education, grades, ethnicity, language, and extracurricular activities.</p> <p><b>Discrepancy:</b></p> <ul style="list-style-type: none"> <li>• Only included at time point 1 (for all phases)</li> <li>• Slight differences between phase 1 and subsequent phases</li> </ul>	<ul style="list-style-type: none"> <li>- important general information for identification and creation of groups</li> </ul>
<i>Genos Emotional Intelligence Inventory (GENOS; Gignac, 2008)</i>	<p>The GENOS is a self-report measure of EI in the workplace, comprised of 70 items assessing the way an individual thinks, feels, and acts at work on the basis of emotional information. This test is the corresponding measure to the theoretical model the program being evaluated is based on. Participants respond on a 5-point Likert-type scale and are instructed to indicate the extent to which each statement is true of the way they typically think, feel and act at work. The GENOS provides seven factor scores of EI. Alpha coefficients for total score have shown to be .96 in the typical population, and ranging from .71 to .85 for the EI sub-scores (Gignac, 2008).</p> <p><b>Discrepancy:</b></p> <ul style="list-style-type: none"> <li>• Only included in phases 2 and 3</li> </ul>	<ul style="list-style-type: none"> <li>- good psychometric properties</li> <li>- maps onto the proposed program</li> <li>- used in and shown to be predictive of positive outcomes in the workplace (Gardner &amp; Stough, 2002)</li> <li>- measures trait EI in accordance with the theory described in this proposal</li> </ul>
<i>The Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF; Petrides &amp; Furnham, 2006)</i>	<p>The TEIQue-SF is a 30-item scale that provides a global trait EI score. A 7-point Likert scale, ranging from 1 (<i>completely disagree</i>) to 7 (<i>completely agree</i>), is used to assess the individual's self-perceived abilities and behavioural dispositions. Cooper &amp; Petrides (2010) reported high levels of internal consistency (<math>\alpha = .89</math> for men; <math>\alpha = .88</math> for women) for global trait EI.</p> <p><b>Discrepancy:</b></p> <ul style="list-style-type: none"> <li>• Only included in phase 1</li> </ul>	<ul style="list-style-type: none"> <li>- good psychometric properties</li> <li>- different trait model (4 factors)</li> </ul>
<i>Wong and Law Emotional Intelligence Questionnaire (WLEIS; Wong, Wong, &amp; Law, 2007)</i>	<p>The WLEIS is a self-report EI measure with four ability dimensions based on the appraisal, understanding, expression, and management of emotion in the self and others. This scale was originally developed for Chinese respondents and contains 16 items with a 7-point Likert-type scale (1 = totally disagree, 7 = totally agree). There are four subscales in the questionnaire: Self Emotion</p>	<ul style="list-style-type: none"> <li>- good psychometric properties</li> <li>- different trait model (4 factors)</li> <li>- allows for secondary operationalization of the EI construct</li> </ul>



	Appraisals, Others' Emotion Appraisals, Regulation of Emotion, and Use of Emotion. Alpha coefficients for total score have been reported to be .86 overall with .86 for males and .87 for females (Shi & Wang, 2007).	and can be mapped onto the SUEIT (Vesely, 2011)
<i>Perceived Stress Scale (PSS; Cohen &amp; Williamson, 1988)</i>	The PSS is a 10-item questionnaire on which respondents are asked about the frequency of specific feelings and thoughts during the past month. Responses are indicated on a Likert scale ranging from 0 (never) to 4 (very often). Cohen et al. (1988) reported an alpha coefficient of .78.	<ul style="list-style-type: none"> <li>- it is a self-report measure of stress</li> <li>- measure is well accepted in the field, frequently cited</li> <li>- sound psychometric properties</li> </ul>
<i>Coping Inventory for Stressful Situations (CISS; Endler &amp; Parker, 1999)</i>	The CISS is a 48-item revised version of the original scale (Endler & Parker, 1999). Respondents indicate how much they engage in various activities during difficult, stressful, or upsetting situations on a 5-point scale, ranging from 1 (not at all) to 5 (very much). The alpha coefficients of the coping subscale were .76 for women and .84 for men in a sample of college students (Endler & Parker, 1999). <b>Discrepancy:</b> <ul style="list-style-type: none"> <li>• Only included in phases 2 and 3 (replaced the OASIS from phase 1 – see below)</li> </ul>	<ul style="list-style-type: none"> <li>- same as the PSS</li> <li>- additionally - divided into types of coping, (one of which is 'emotion-focused coping'), that can be easily be parsed out of statistical analysis given the subject matter</li> </ul>
<i>The Overall Anxiety Severity and Impairment Scale (OASIS; Norman, Cissell, Means-Christensen, &amp; Stein, 2006)</i>	The OASIS is 5-item questionnaire (self-report) that measures the severity and impairment of anxiety (for clinical and nonclinical samples). Responses are recorded on a scale of 0–4. The OASIS developers reported a coefficient alpha of .80. <b>Discrepancy:</b> Only included in phase 1	<ul style="list-style-type: none"> <li>- decent psychometric properties</li> <li>- no cost</li> <li>- short means of looking at anxiety in a non-clinical population</li> </ul>
<i>Satisfaction with Life Scale (SWL; Diener, Emmons, Larson, &amp; Griffen, 1985)</i>	The SWL is a 5-item measure that generates a global life-satisfaction score using a 7-point Likert scale (1 = <i>Strongly disagree</i> , 7 = <i>Strongly agree</i> ). Cronbach's alpha for this scale has been shown to be .87 (Diener et al., 1985).	<ul style="list-style-type: none"> <li>- Widely accepted in the field</li> <li>- Good proxy for wellbeing and general positive day-to-day satisfaction</li> </ul>
<i>The Teacher's Sense of Efficacy Scale (TSES-SF; Tschannen-</i>	The TSES- SF is a 12-item measure that assesses teacher competence and task demands in particular teaching contexts. It yields scores on three dimensions of teacher efficacy (Instructional Strategies, Classroom Management, and Student Engagement). Items are	<ul style="list-style-type: none"> <li>- it is most accepted teacher efficacy measure in the field</li> <li>- built upon the foundation of</li> </ul>

<i>moran and Woolfolk Hoy, 2001)</i>	rated on a 9 point scale Likert scale ranging from “nothing” to “a great deal”. The scale has good internal consistency, with Cronbach alphas ranging from .90 for total score and from .81 to .86 for each subscale (Tschannen-Moran & Woolfolk Hoy, 2001).	<p>numerous other measures (e.g., Guskey, 1981; Rose &amp; Medway, 1981; Ashton et al., 1982)</p> <ul style="list-style-type: none"> <li>- good psychometric properties</li> </ul>
<i>The Resiliency Scales for Children and Adolescents – Adult Version Revised (RSCA-A-R; Saklofske et al., 2011)</i>	<p>The RSCA-A-R is a modified version of the <i>Resiliency Scale for Children and Adolescents</i> (RSCA; Prince-Embury, 2007), which has included eight additional items intended to characterize the appropriate developmental trajectory of adults (added to the <i>Sense of Mastery scale</i>). It assesses the core constructs found to underlie personal resiliency. The RSCA-A-R contains 72 items and three global scales, with 28 items for the <i>Sense of Mastery scale</i>, 24 items for the <i>Sense of Relatedness scale</i>, and 20 items for the <i>Emotional Reactivity scale</i>. Participants indicate their responses on a five-point Likert scale. Cronbach alpha coefficients are 0.91 (<i>Sense of Mastery</i>), 0.93 (<i>Sense of Relatedness</i>), and 0.91 (<i>Emotional Reactivity</i>; Saklofske et al., 2013).</p> <p><b>Discrepancy:</b></p> <ul style="list-style-type: none"> <li>• Phases 2 and 3 include a more updated version of this scale being developed for use with young adults. It is currently being tested in other samples (unpublished). However, resilience was not reported in the analysis of phases 2 and 3 due to high frequency of response sets in the data.</li> </ul>	<ul style="list-style-type: none"> <li>- Good psychometric properties</li> <li>- Potentially a similar predictor like EI</li> <li>- Theoretically a “coping variable”</li> </ul>

Note (frequency of use). All of the outcome questionnaires in this Table were administered at set time points, specifically, at the start and end of the program (pre and post) in addition to 1-month (and 6-month for phases 2 and 3) follow-up time point(s) from the end date. The control group completed these same questionnaires at baseline (when the program group begins the first of five sessions), when the program group completes the program, and at parallel follow-up time points.

Table 30

*Skewness and Kurtosis Values as a Measure of Normality*

	VARIABLE	N	SKEWNESS		KURTOSIS	
			Value	St. Error	Value	St. Error
<i>Program</i>	TSES 1	34	-.323	.403	-.330	.788
	TSES 2	33	-.754	.409	-.171	.798
	TSES 3	31	-1.209	.421	1.245	.821
	TSES 4	27	-1.281	.448	2.206	.872
<i>Control</i>	TSES 1	21	.054	.501	.176	.972
	TSES 2	21	.312	.501	.182	.972
	TSES 3	13	-.314	.616	.755	1.191
	TSES 4	11	.123	.661	-1.692	1.279
<i>Program</i>	PSS 1	34	.417	.403	.645	.788
	PSS 2	33	.482	.409	-.487	.798
	PSS 3	30	.432	.427	-.853	.833
	PSS 4	26	.719	.456	1.056	.887
<i>Control</i>	PSS 1	20	1.084	.512	1.316	.992
	PSS 2	21	1.058	.501	.744	.972
	PSS 3	13	.538	.616	-1.077	1.191
	PSS 4	11	.813	.661	-.427	1.279
<i>Program</i>	GENOS 1	34	-.298	.403	.804	.788
	GENOS 2	33	-.257	.409	-.337	.798
	GENOS 3	30	-.238	.427	-.128	.833
	GENOS 4	26	-.626	.456	.094	.887
<i>Control</i>	GENOS 1	20	.926	.512	1.829	.992
	GENOS 2	21	.036	.501	1.162	.972
	GENOS 3	13	.744	.616	1.888	1.191
	GENOS 4	11	-.145	.661	-.215	1.279
<i>Program</i>	SWL 1	30	-.082	.427	-.684	.833
	SWL 2	29	-2.116	.434	7.339	.845
	SWL 3	26	-1.037	.456	1.133	.887
	SWL 4	22	-1.198	.491	1.030	.953
<i>Control</i>	SWL 1	19	-.662	.524	-.064	1.014
	SWL 2	20	-1.310	.512	.783	.992
	SWL 3	12	-.694	.637	-.324	1.232
	SWL 4	9	-.523	.717	1.325	1.400
<i>Program</i>	Task CISS 1	33	-.120	.409	-.514	.798
	Task CISS 2	32	-.575	.414	.470	.809
	Task CISS 3	30	-.770	.427	.491	.833
	Task CISS 4	26	-.572	.456	-.697	.887
<i>Control</i>	Task CISS 1	20	.727	.512	.533	.992
	Task CISS 2	21	-.631	.501	.439	.972
	Task CISS 3	13	.298	.616	-.134	1.191
	Task CISS 4	11	-1.500	.661	4.538	1.279
<i>Program</i>	Emot CISS 1	33	.334	.409	-.608	.798

	<b>Emot CISS 2</b>	33	.531	.409	-.849	.798
	<b>Emot CISS 3</b>	30	1.113	.427	.587	.833
	<b>Emot CISS 4</b>	26	.950	.456	.572	.887
<i>Control</i>	<b>Emot CISS 1</b>	20	.889	.512	1.121	.992
	<b>Emot CISS 2</b>	21	.973	.501	1.570	.972
	<b>Emot CISS 3</b>	13	.805	.616	1.091	1.191
	<b>Emot CISS 4</b>	11	-.062	.661	-1.479	1.279
<i>Program</i>	<b>Avoid CISS 1</b>	34	-.271	.403	-.494	.788
	<b>Avoid CISS 2</b>	33	-.100	.409	.036	.798
	<b>Avoid CISS 3</b>	30	-.210	.427	.962	.833
	<b>Avoid CISS 4</b>	26	.369	.456	-.492	.887
<i>Control</i>	<b>Avoid CISS 1</b>	20	-.565	.512	.492	.992
	<b>Avoid CISS 2</b>	21	-.187	.501	-.427	.972
	<b>Avoid CISS 3</b>	13	1.312	.616	1.539	1.191
	<b>Avoid CISS 4</b>	11	-.360	.661	.142	1.279
<i>Program</i>	<b>WLEIS 1</b>	30	-.427	.427	-.344	.833
	<b>WLEIS 2</b>	29	-.208	.434	-.747	.845
	<b>WLEIS 3</b>	27	-.528	.448	1.012	.872
	<b>WLEIS 4</b>	23	-1.220	.481	1.690	.935
<i>Control</i>	<b>WLEIS 1</b>	18	.988	.536	2.215	1.038
	<b>WLEIS 2</b>	19	-.827	.524	1.132	1.014
	<b>WLEIS 3</b>	11	-1.096	.661	1.898	1.279
	<b>WLEIS 4</b>	9	.343	.717	-1.043	1.400

Note. Non-normal distributions for groups that were used in analyses, are indicated in red.



Practice Log – Week \_\_\_\_\_ ID \_\_\_\_\_

**Homework**

1. Did you complete your homework this week:  
Yes                  No

2. Please rate the level of effort you put in to your homework

+

1	2	3	4	5
No effort		A moderate amount of effort		I gave it my all

3. Are there any comments you'd like to include regarding your homework?

---

---

**Reflection** – Please reflect on the goal you set for yourself and then the skills you practiced.

---

---

---

---

---

---

---

---

---

---

## **Appendix C: Program Revisions**

### **Program Revisions: Changes from Original Program to Program Version 1**

Changes made to the EI program between the original and version one used for phase one, were minimal and provided a clearer organizational framework. Specifically, the workbooks were edited for clarity and unnecessary explanations; certain examples were removed from the workbook text. A number of examples in the workbook and PowerPoint slides were changed to be more focused on the classroom and teaching environment. The time spent on the number of activities was increased in comparison to the time noted for the original program with less time spent on discussion slides that were repetitive from the psychoeducational material. Additionally, final feedback forms, unique from those described subsequently were collected following phase one, with the feedback integrated into the second round of changes that are discussed below.

### **Further Program Revisions: Changes from Program Version 1 to Program Version 2**

Additional changes to the program were made based on participant feedback and logistic concerns from the program's previous implementation. Sessions were changed from 1.5 hours in length to spanning two hours to accommodate a more interactive component such as discussion and extended activities. Further, the emotional intelligence dimensions discussed throughout the program spanned a longer period of time in general such that fewer factors were discussed each day than in the original program. This resulted in the last dimension being taught on the 5<sup>th</sup> day rather than the 4<sup>th</sup>, leaving more time for in-class inquiries, activities, and discussion. Slides were re-organized to fit the structure of the newly organized program. A number of other simple additions were made organizationally, such as utilizing name-tags, sending emails with weekly homework reminders, and providing individuals time to complete homework sheets in class in order to reduce time spent on work at home. Worksheets, feedback forms, reflections, and homework sheets that were created and catered to the program, were added in order to facilitate program evaluation.

There were also additions made to the content. The workbook edits that were changed in the previous phase remained. Slides were modified to increase the explanations on each EI skill with the addition of media examples to illustrate the positive and negative use of skills and to facilitate discussion of their overlap. Slides with additional theory on EI, such as the theoretical

model, as well as more recent empirically-based examples regarding EI's relation to stress and the variety of outcomes that result from stress were included in the workshop slides. Given that the aims of the workshop were to increase participant involvement, some slides that were meant to be lecture-based, were converted into a discussion. For example, a series of slides on why each EI skill is important became interactive. Similarly, a brief period on homework feedback was included at the beginning of each session such that participants could express personal struggles or triumphs with what they were working on, which has been previously shown to facilitate behavior change. Given the background of the program facilitators, many explanations drew on a clinical perspective as viewed through the following newly included activities.

In addition to the activities stemming from the empathy and anger literature as cited in Gardner's (2005) original program, a number of empirically-based activities for improving skills that overlap with EI were included. The aim of this section was to increase the focus on evidence-based methods and emphasize the inclusion of empirically based information and activities. For instance, when teaching cognitive re-structuring, a handout for unhelpful thinking styles was provided to further emphasize cognitive distortions and to aid individuals with emotional reasoning and self-management. Psychoeducation involving such learning has often been used and is supported in the cognitive-behavioral therapy (CBT) literature (Taylor et al., 1997). Other components of CBT that are viewed to be relevant to learning EI skills were also included, such as: the use of thought records as an optional homework activity, a focus on prevention rather than intervention, and the idea that practice is a key component of making true changes and hence the emphasis on homework (see Friedman, Thase, & Wright, 2008 for a review of both cognitive and behavioral therapies). Personal effectiveness and mastery were emphasized throughout and explanations that included skills from the clinical literature, such as a focus on being in the moment and acceptance from dialectical behavior therapy (DBT) when discussing emotional self-awareness (ESA) (Linehan, 2014; Linehan, Bohus, & Lynch, 2007). Further, though mindfulness was already a component of the ESA portion of the workshop, additional mindfulness practice was included in each session after it was taught and participants were encouraged to practice this as a basic skill. When discussing emotional management and control, skills from DBT were also utilized to make the distinction between solving a problem and acknowledging when a problem was beyond the individual's control (Linehan, 2014). When creating additional exercises as homework, for example, goal setting, the long-supported criteria



of “SMART - specific, measurable, achievable, realistic, and time-bound” was used to delegate how to set goals (Doran, 1981). Any changes to activities, slides, or the workbook, incorporated guidance from either previous implementation or the empirical literature.

## Appendix D: Permission for Article Inclusions

### Permission to include CJSP article (Vesely, Saklofske, & Leschied, 2013)

Gmail - permission to include my journal article in dissertation

<https://mail.google.com/mail/u/0/?ui=2&ik=f20bfaf04b&view...>

Hi Don,

It's OK to re-use the accepted version of the manuscript in the dissertation. To answer your second query, under our publishing policies, the author can share the submitted version of the manuscript with colleagues.

Hope this helps, but please just let me know if you have any follow-up queries.

Best,  
Dan

*SAGE - Celebrating 50 years*

---

**From:** Donald Saklofske [mailto: ]  
**Sent:** Tuesday, March 03, 2015 1:17 PM  
**To:** Ashley Vesely; Sawney, Daniel; Schentrup, Calyx  
**Subject:** Re: permission to include my journal article in dissertation

[Quoted text hidden]

---

**Donald Saklofske** < > Wed, Mar 4, 2015 at 1:47 AM  
 To: "Sawney, Daniel" < >, Ashley Vesely < >, "Schentrup, Calyx" < >

Thanks again Dan ... I will pass along this good news to the authors.

cheers

don

[Quoted text hidden]

---

**Donald Saklofske** < > Wed, Mar 4, 2015 at 3:01 AM  
 To: "Sawney, Daniel" < >, Ashley Vesely < >, "Schentrup, Calyx" < >

Thanks Dan.

Ashley... it is 'a go' for you.

cheers

**Permission to include PAID article (Vesely, Saklofske, & Nordstokke, 2013)**

Gmail - Re: Personality and Individual Differences Enquiry: pe...

<https://mail.google.com/mail/u/0/?ui=2&ik=f20bfaf04b&view...>

Ashley Vesely &lt;

&gt;

**Re: Personality and Individual Differences Enquiry: permission to include article in dissertation**

1 message

**Tony Vernon** <

&gt;

Tue, Feb 17, 2015 at 1:22 PM

To: Ashley Vesely &lt;

&gt;

Permission granted, Ashley.

Best,  
Tony

Sent from my iPad

&gt; On Feb 16, 2015, at 4:34 AM, Ashley Vesely &lt;

&gt; wrote:

&gt;

&gt; The following enquiry was sent via the Elsevier website:

&gt;

&gt; -- Sender --

&gt; First Name: Ashley

&gt; Last Name: Vesely

&gt; Email:

&gt;

&gt; -- Message --

&gt; Hi Dr. Vernon,

&gt;

&gt; I hope you are well and have had a nice start to the new year :)!

&gt;

&gt; I am emailing you because in order to include my article

&gt; entitled, "EI training and pre-service teacher wellbeing," (authors: Ashley K. Vesely, Donald H. Saklofske, &amp; David W. Nordstokke; from the special EI issue of PAID) in my dissertation, I require official written permission from the editor of the journal that I am to include in the appendix. This article serves as a nice general introduction to the three studies I completed as part of my PhD project! Would you please be so kind as to write me a permission letter for this purpose?

&gt;

&gt; Thank you!

&gt;

&gt; Sincerely,

&gt;

&gt; Ashley Vesely

&gt;

&gt;

&gt; --

&gt; This email was sent you by Elsevier B.V. on behalf of Ashley Vesely ( )

&gt; Elsevier B.V., Radarweg 29, 1043 NX Amsterdam, The Netherlands. Reg. No. 33156677.

&gt;

**ASHLEY VESELY-MAILLEFER, M.Sc., Ph.D. Candidate**  
*Curriculum Vitae*

**EDUCATION**

---

- 2015            **Doctor of Philosophy, Clinical Psychology**  
University of Western Ontario, London, ON  
*Supervisor:* Dr. Donald H. Saklofske, Ph.D., C. Psych.  
*Dissertation:* “Striving For Teaching Success: Enhancing Emotional Intelligence in Pre-Service Teachers”
- 2011            **Master of Science, School and Applied Child Psychology**  
University of Calgary, Calgary, AB  
*Supervisor:* Dr. Donald H. Saklofske, Ph.D., C. Psych.  
*Thesis:* “Differential Effects of Perfectionism and Anxiety on Trait and Ability Emotional Intelligence”
- 2008            **Bachelor of Arts & Science with Honours in Psychology**  
McMaster University, Hamilton, ON  
*Supervisor:* Dr. Sherry Van Blyderveen, Ph.D., C. Psych  
*Thesis:* “Relationship Quality and Eating Disordered Symptoms: A Consideration of the Mediating Role of Social Anxiety”

**RESEARCH: PUBLICATIONS AND PRESENTATIONS**

---

***Publications In Progress***

- Andrei, F., **Vesely, A. K.**, & Siegling, A. B. (in progress). An Examination of Concurrent and Incremental Validity of Four Mindfulness Inventories.
- Fiori, M., & **Vesely, A. K.** (in progress). Review of Ability-Based Emotional Intelligence. In K. Keefer, J. Parker, and D. H. Saklofske (Eds.), *The handbook of emotional intelligence in education*. New York: Springer Publications.
- Vesely, A. K.** & Saklofske, D. H. (in progress). Emotional Intelligence Training for Teachers. In K. Keefer, J. Parker, and D. H. Saklofske (Eds.), *The handbook of emotional intelligence in education*. New York: Springer Publications.

***Peer Reviewed Publications***

- Siegling, A. B., Saklofske, D. H., **Vesely, A. K.**, & Nordstokke, D. W. (2012). Relations of emotional intelligence with gender-linked personality: Implications for a refinement of EI constructs. *Personality and Individual Differences*, 52, 776-781. doi: 10.1016/j.paid.2012.01.003
- Siegling A. B., **Vesely, A. K.**, & Saklofske, D. H. (2013). Advancing the content domain of trait EI: Further evidence for the distinctiveness of interpersonal facets. *Personality and Individual Differences*, 54, 81-86. doi: 10.1016/j.paid.2012.08.010
- Siegling A. B., **Vesely, A. K.**, Petrides, K.V., & Saklofske, D. H., (in press). Incremental validity of the adult and adolescent short forms of the trait emotional intelligence questionnaire. *Journal of Personality and Assessment*.
- Vesely, A. K.**, Saklofske, D. H., & Leshied, A. D. W. (2013) Teachers - The vital resource: The contribution of emotional intelligence to teacher efficacy and wellbeing. *Canadian Journal of School Psychology*, 28(1), 71-89. doi: 10.1177/0829573512468855
- Vesely, A. K.**, Saklofske, D.H., & Nordstokke, D. W. (2014). EI training and pre-service teacher

wellbeing. *Personality and Individual Differences*, 65, 81-85. doi: 10.1016/j.paid.2014.01.052

**Vesely, A. K.**, Siegling, A. B., Saklofske, D.H. (2013). Gender-linked personality and mental health: The role of trait emotional intelligence. *Personality and Individual Differences*, 54, 221-225. doi: 10.1016/j.paid.2012.08.038

### **Book Chapters**

Prince-Embury, S. Saklofske, D. H., & **Vesely, A. K.** (2014). Measures of resiliency and hardiness. In G. J. Boyle, D. H. Saklofske, and G. Matthews (Eds.), *Measures of Personality and Social Psychological Constructs*. Canada: Elsevier.

Saklofske, D. H., Nordstokke, D. W., Prince-Embury, S., Crumpler, T., Nugent, S., **Vesely, A. K.**, & Hinds, Y. (2011). Assessing personal resiliency in young adults: The resiliency scale for children and adolescents. In S. Prince-Embury and D. H. Saklofske (Eds.), *Resilience in children, adolescents, and adults: Translating research into practice*. New York: Springer.

### **Symposiums/ Oral Presentations**

Saklofske, D.H., Nordstokke, D. H., & **Vesely, A. K.\*** (July 2013). *EI training and pre-service teacher wellbeing*. Symposium presented at the International Society for the Study of Individual Differences Annual Convention, Barcelona, Spain. **\*Presenter**

Vesely, A. K. (May 2014). *Emotional Intelligence in the context of teacher efficacy*. SSHRC Storytellers Top 25 speech at the Congress of the Humanities and Social Sciences, St. Catharines, ON. [http://www.sshrc-crsh.gc.ca/news\\_room-salle\\_de\\_presse/latest\\_news-nouvelles\\_recentes/2014-top\\_25-25\\_finalistes-eng.aspx](http://www.sshrc-crsh.gc.ca/news_room-salle_de_presse/latest_news-nouvelles_recentes/2014-top_25-25_finalistes-eng.aspx)

**Vesely, A. K.**, & Saklofske, D.H. (June 2014). *Emotional intelligence training for pre-service teachers: A program evaluation*. Symposium presented the Annual Canadian Psychological Association Convention, Vancouver, BC.

**Vesely, A. K.**, Saklofske, D.H., Leschied, A. D. W. (June 2013). *Teacher efficacy and wellbeing: Understanding the contribution of emotional intelligence*. Symposium presented at the Annual Canadian Psychological Association Convention, Quebec City, QB.

**Vesely, A. K.**, Saklofske, D.H., Nordstokke, D. W. (June 2013). *Examining the effects of EI training on pre-service teacher wellbeing and efficacy*. Symposium presented at the Annual Canadian Psychological Association Convention, Quebec City, QB.

**Vesely, A. K.**, Saklofske, D.H., Nordstokke, D. W. (June 2014). *Training emotional intelligence in pre-service teachers*. Symposium presented at the Annual Canadian Psychological Association Convention, Vancouver, BC.

### **Poster Presentations**

Nordstokke, D.W., Saklofske, D.H., **Vesely, A. K.**, Crumpler, T. & Nugent, S. (June 2011). *Investigating psychological factors related to university student success*. Poster presented at the Canadian Psychological Association Annual Convention, Toronto, ON.

Semple, T. D., Saklofske, D. H., Nugent, S. M., **Vesely, A. K.**, Hinds, Y. L., & Prince-Embury, S. (February 2011). *Resilience profiles in an undergraduate population*. Poster presented at the National Association of School Psychologists 2011 Annual Convention, San Francisco, CA.

Semple, T. D., **Vesely, A. K.**, Saklofske, D. H., Nordstokke, D.W., & Nugent, S. N. (October 2010). *An investigation into the construct of resilience in an adult population*. Poster presented at the University of Calgary's 3<sup>rd</sup> Annual Faculty of Education Graduate Student Research Poster Conference, Calgary, AB.

Siegling, A. B., Saklofske, D. H., & **Vesely, A. K.** (October 2010). *Trait EI: Relationship with the big five and gender role attributes in an undergraduate student sample*. Poster presented at the University of Calgary's 3<sup>rd</sup> Annual Faculty of Education Graduate Student Research Poster Conference, Calgary, AB.

Smith, M. M., Saklofske, D. W., Prince-Embury, S., D. H., Nordstokke, & **Vesely, A. K.** (July 2013). *Measuring personal resiliency in young adulthood: The resiliency scale for young adults*. Poster accepted at the International Society for the Study of Individual Differences Annual Convention, Barcelona, Spain.

**Vesely, A. K.**, & Saklofske, D. H. (July 2014). *Improving teacher efficacy: Evaluating how emotional intelligence training helps*. Poster presented at the 17th European Conference on Personality, Lausanne, Switzerland.

**Vesely, A. K.**, Saklofske, D.H., & Siegling, A. B., Nordstokke, D. W. (June 2011). *Emotional intelligence: Relationships with perfectionism, anxiety, and motivation*. Poster presented at the Canadian Psychological Association Annual Convention, Toronto, ON.

**Vesely, A. K.**, Siegling, A. B., Saklofske, D.H., Nordstokke, D. W. (July 2013). *Personality and mental health: Further investigation for the decisive role of emotion-related traits*. Poster presented at the International Society for the Study of Individual Differences Annual Convention, Barcelona, Spain.

**Vesely, A. K.**, Siegling, A. B., Saklofske, D.H., Nordstokke, D. W. (June 2012). *Gender-specific personality and mental health outcomes: The role of trait emotional intelligence*. Poster presented at the Canadian Psychological Association Annual Convention, Halifax, NS.

## RESEARCH: OTHER ACTIVITIES

### *Journal or Conference Reviewer*

- British Journal of Education, Society & Behavioural Science (2012)
- Canadian Journal of Behavioral Science (2013)
- Abstracts for Psychologists in Education section of Canadian Psychological Association (2012-present)

### *Newsletter Editor*

- Canadian Association of School Psychologists Newsletter (2012 - present)

### *Affiliations and Representation*

- Student Representative of CPA's Psychologists in Education section (2012 - present)
- Student Representative of the London Regional Psychological Association (2013 - 2014)
- Society for a Science of Clinical Psychology member (SCCP; 2011 - present)
- London Regional Psychological Association member (LRPA; 2011- present)
- Canadian Association of School Psychologists member (CASP; 2010 - present)
- Canadian Psychological Association member (CPA; 2009-present)

## ACADEMIC AWARDS AND HONOURS

Date	Award	Institution	Value
2014	Top 25 SSHRC Storytellers Award	Social Sciences and Humanities Research Council of Canada (SSHRC)	\$3,000
2013 - 2015	Canadian Graduate Scholarship	Doctoral SSHRC	\$40,000
2014/2015	Graduate Teaching Award (GTA) Scholarship	University of Western Ontario	\$9,100

2014/2015	Western Graduate Research Scholarship	University of Western Ontario	\$1,200
2013/2014	Graduate Teaching Award (GTA) Scholarship	University of Western Ontario	\$9,100
2013/2014	Western Graduate Research Scholarship	University of Western Ontario	\$1,500
2012/2013	Graduate Teaching Award (GTA) Scholarship	University of Western Ontario	\$9,100
2012/2013	Western Graduate Research Scholarship	University of Western Ontario	\$10,900
2011/2012	Graduate Teaching Award (GTA) Scholarship	University of Western Ontario	\$9,100
2011/2012	Western Graduate Research Scholarship	University of Western Ontario	\$10,900
2011	Applied Psychology Travel Award	University of Calgary	\$1,000
2011	Queen Elizabeth II Graduate Scholarships	University of Calgary	\$3,600
2011	Alberta Graduate Student Scholarship	Alberta Learning	\$3,000
2010	Queen Elizabeth II Graduate Scholarships	University of Calgary	\$7,200
2010	Top Student Award	University of Calgary	\$700
2009	Queen Elizabeth II Graduate Scholarships	University of Calgary	\$7,200
2004	McMaster University Entrance Award	McMaster University	\$2,000

### CLINICAL TRAINING: SUPERVISED CLINICAL EXPERIENCE

#### Internship

- *The Hospital For Sick Children, Toronto, ON*  
(September 2015 – Present)

#### Supervision Practicum

- *The Waitlist Clinic - Canadian Mental Health Association, London, ON*  
(September 2014 – December 2014)

#### General Clinical Practicum

- *London Family Court Clinic, London, ON*  
(May 2014 – December 2014)
- *Pediatric Oncology & Children's Health - London Health Sciences Centre, London, ON*  
(March 2014 – September 2014)
- *Child, Adolescent, & Adult Mental Health - London Health Sciences Centre, London, ON*  
(September 2013 – June 2014)
- *Children's Hospital - London Health Sciences Centre, London, ON*  
(May 2013 – September 2014)
- *Thames Valley District School Board, London, ON*  
(September 2012 – June 2013)
- *Private Practice, London, ON*  
(January 2012 – August 2012)
- *Hull Child and Family Services, Calgary, AB*

(May 2011 – June 2011)

- *University of Calgary Applied Psychological and Educational Services (U-CAPES), Calgary, AB (January 2009 – June 2011)*

## RELEVANT EMPLOYMENT AND RESEARCH EXPERIENCE

- *Emotional Intelligence Program Instructor - University of Western Ontario, London, ON (January 2013/ October 2013/January 2014)*
- *Research Coordinator for Emotional Intelligence Research Study - University of Western Ontario, London, ON (September 2011 - January 2013)*
- *Research Assistant/Clinician for Strengths in ADHD Research Project - University of Calgary, Calgary, AB (September 2010 - July 2011)*
- *Behavioral Aide for Child with Developmental Delay - Family Support for Children with Disabilities (FSCD), Calgary, AB (November 2009 – May 2011)*
- *Research Assistant for Emotional Intelligence and Resilience Study - University of Calgary, Emotional Intelligence Consortium, Calgary, AB (October 2009 – April 2010)*
- *Volunteer Research Assistant - Youth Psychiatry, Sunnybrook Health Sciences Centre/Hospital for Sick Children, Toronto, ON (November 2008 - August 2009)*
- *Clinical Interviewer - Pediatric Psychology, The Hospital for Sick Children, Toronto, ON (November 2008 – August 2009)*
- *Volunteer Group Leader - Youth Mental Health, Centre for Addiction and Mental Health, Toronto, ON (January 2009 – June 2009)*
- *Volunteer Research Assistant - Anxiety Disorders Research Clinic, Sunnybrook Health Sciences Centre, Toronto, ON (October 2008 – August 2009)*
- *Research Assistant - Peer Relations Lab, McMaster University, Hamilton, ON (August 2007 – August 2008)*
- *Volunteer Research Assistant - McMaster Children's Hospital, McMaster Health Sciences, Hamilton, ON (November 2007 – April 2008)*

## CONTINUING EDUCATION/PROFESSIONAL DEVELOPMENT

### *Training Certifications*

- *Applied Suicide Intervention Skills Training (ASIST), Center for Suicide Prevention*
- *Structured Clinical Interview for DSM-IV (SCID), University of Western Ontario*
- *Anxiety Disorders Interview Schedule for DSM-IV (ADIS), SickKids Hospital*
- *Infant and Toddler Environment Rating Scale Revised (ITERS-R), McMaster University*
- *Early Childhood Play Project (ECPP), McMaster University*
- *Brief Child and Family Phone Interview (BCFPI), McMaster University*
- *Early Childhood Environment Rating Scale Revised (ECERS-R), Hamilton Affiliated Services for Children and Youth*

### *External Workshops*

- *Advances in the Understanding and Management of ADHD (2009). Presented by Dr. Russell Barkley, Calgary, AB*
- *Treating Obsessive Compulsive Disorder and Perfectionism (2013). Presented by Dr. Martin Antony, Toronto ON*



- *Storytellers Showcase Workshop* (2014). Facilitated by Shari Graydon and Pierre Chastenay, St. Catharines, ON.

#### ***Internal Workshops (University of Western Ontario)***

- *Motivational Interviewing* (2014). Presented by Dr. Henny Westra
- *The Business of Private Practice* (2013). Presented by Lindsey Forbes
- *Dialectical Behavior Therapy* (2013). Presented by Dr. Walter Friesen
- *Couples Sex Therapy* (2012). Presented by Dr. Guy Grenier
- *Emotion-Focused Therapy* (2012). Presented by Dr. Alberta Pos
- *Positive psychology* (2011). Presented by Dr. Tayyab Rashid

#### ***Internal Workshops (University of Calgary)***

- *Pervasive Developmental Disorders* (2010). Presented by Dr. A. McCrimmon
- *Creative Methods for Helping Parents/Children: Developmental Play Therapy and Marte Meo* (2009). Presented by Drs. D.H. Soderquist, & B. Edkstedt
- *Developmental Coordination Disorder* (2009). Presented by Dr. P. Kamps

#### ***Selected Topics for Clinical Psychology Seminars and Colloquia***

- *Alternative roles for psychology*: Program Evaluation; Consultation-Liaison; Private Practice Issues
- *Diversity issues*: Therapy with Transgendered Clients; Stigma in Mental Health
- *Intervention and assessment techniques*: Applied Behavioural Analysis; Using the WISC and WIAT; Psycho-vocational Assessment; Biofeedback; Assessment of Learning
- *Professional development*: Self-Care in Clinical Practice; Delivering a Difficult Diagnosis; Ethics in Social Media; DSM-5 Updates
- *Psychopathology and presenting issues*: Dual Diagnosis; Children with Intellectual Disabilities Substance Use Comorbidity; End-of-Life Issues; Differential Diagnosis of Mood Disorders; Trauma Therapy; Fetal Alcohol Syndrome/Spectrum Disorders; Chronic Pain; Eating Disorders
- *Risk assessment*: Child Abuse in the System; Assessment of Suicide Risk

#### ***Conferences Attended***

- *High Conflict Forum* (2014), Hamilton, ON
- *Annual European Conference on Personality* (2014), Lausanne, Switzerland.
- *Annual Meeting of the Canadian Psychological Association* (2014), Vancouver, BC
- *International Society for the Study of Individual Differences Bi-Annual Convention* (2013), Barcelona, Spain.
- *Annual Meeting of the Canadian Psychological Association* (2013), Quebec City, QC
- *Annual Meeting of the Canadian Psychological Association* (2012), Halifax, NS
- *Annual Meeting of the Canadian Psychological Association* (2011), Toronto, ON
- *McMaster Graduate Student Conference* (2008), Hamilton, ON

## **TEACHING EXPERIENCE**

### ***Graduate:***

#### **Teaching Assistantships - University of Western Ontario, London, ON**

- Psych 1000 – Introduction to Psychology (Fall 2014/Winter 2015)
- Psych 2820 – Research Methods and Statistics (Fall 2013/Winter 2014)
- Psych 3300 – Introduction to Clinical Psychology (Fall 2012/Winter 2013)
- Psych 2900 – Applications of Psychology (Summer 2012)
- Psych 1000 – Introduction to Psychology (2011/2012)

*Note:* Duties for both Psych 3300 and Psych 2820 involved preparing and teaching weekly 2-3 hour tutorials in addition to grading assignments, proctoring, responding to student inquiries, and holding office hours required by all remaining classes

**Co-supervision of Undergraduate Thesis (with Dr. D. H. Saklofske)**

- Met weekly with honours student to mentor her through all phases of undergraduate research project – from the generation of an idea to developing research questions, and collecting as well as analysing data. Both supervisor and I gave her feedback on her writing and oral presentation skills

**Academic Lectures**

- Guest Lecturer for Dr. Saklofske's Psychology in Education Class in which I spoke about psychoeducational assessments and intake interviews

**Lab Meeting Facilitator**

- Stepped in for supervisor Dr. Saklofske a few times per year to lead and facilitate discussion for lab meetings conducted with Ph.D., Masters, and Honours students presenting their research

**Undergraduate:****Teaching Assistantships - McMaster University, Hamilton, ON**

- Psych 1X03/1XX3 – Introductory Psychology, Fall 2007/Winter 2008

\*Note: Duties for both sections involved structuring lesson plans for two class sessions per week and holding office hours each week in addition to attending regular meetings, organizing group projects, facilitating class discussion, marking papers, updating website materials, and responding to student e-mails

**OTHER CONTRIBUTIONS & ACTIVITIES****Awareness Promotion**

- *Marketing Committee of 'Advocacy Through Action'* (2012 - 2014) - promoted public lectures given by clinical psychology graduate students in order to provide the community with resources and evidence-based information on mental health
- *Volunteer at the Mood Disorder's Association of Ontario* (2004-07)

**Community/Public Education Presentations**

Ashley Vesely & Kathryn Turnbull, *Learning Ability and Disability*. Presented to employees of London Life Lunch and Learn series, London Ontario, April 10, 2014.

Ashley Vesely, *Learning Ability and Disability*. Presented to staff at their TVDSB professional development day, Woodstock, Ontario, March 7, 2014.

Ashley Vesely & Kathryn Turnbull, *Learning Diversity and Disability*. "Finding Your Way" Series, London Public Library, February 01, 2014.

Ashley Vesely & Kathryn Turnbull, *Learning Diversity and Disability*. "Finding Your Way" Series, London Public Library, February 16, 2013.

Ashley Vesely & Kathryn Turnbull, *Learning Diversity and Disability*. "Finding Your Way" Series, London Public Library, February 25, 2012.

**Representation**

- Applied Psychology Graduate Students' Union (APGSU) elected co-president, University of Calgary (June 2011)
- Applied Psychology Graduate Students' Union (APGSU) social representative, University of Calgary (2009-2011)
- Arts and Science Program social-committee volunteer (2007-08)
- McMaster University Floor Inter-Residence Council Representative (2005)
- McMaster University Welcome-week representative (2004)

*Extracurricular*

- King's College Chamber Choir member (2011-present)
- University of Western Ontario Triathlon Club (2012, 2014-present)
- Member of Women in Science Discussion group (2013)
- Eating Disorders Group member (2010-2012)
- Allies for Autism Walk fundraiser (2010)
- University of Calgary Chamber Choir member (2010-2011)
- Speakeasy Volunteer/ESL tutor (2007-2008)
- Actress in annual McMaster Drama Production (2006-08)
- AIDS Walk fundraiser (2004-06)