

The Springer Series on Human Exceptionality

Kateryna V. Keefer · James D. A. Parker
Donald H. Saklofske *Editors*

Emotional Intelligence in Education

Integrating Research with Practice



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The Springer Series on Human Exceptionality

Series Editors

Donald H. Saklofske
Department of Psychology
University of Western Ontario
London, ON, Canada

Moshe Zeidner
Department of Human Development
University of Haifa
Haifa, Israel

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Kateryna V. Keefer
Department of Psychology
Trent University
Peterborough, ON, Canada

James D. A. Parker
Department of Psychology
Trent University
Peterborough, ON, Canada

Donald H. Saklofske
Department of Psychology
University of Western Ontario
London, ON, Canada

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*To my son, Finn: never forget that it's okay
to feel upset.*

K.V.K.

*For my three sons, James, William, and Zack,
who have been known to point out when their
father could be more emotionally intelligent.*

J.D.A.P.

*To Vicki for your commitment to making a
better world for children.*

D.H.S.

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Contributors

Stefan Ackermann Department of Performance Psychology, German Sport University Cologne, Cologne, Germany

Hideko H. Bassett Department of Psychology, George Mason University, Fairfax, VA, USA

Richard E. Boyatzis Weatherhead School of Management, Case Western Reserve University, Cleveland, OH, USA

Marc A. Brackett Yale Center for Emotional Intelligence, Yale University, New Haven, CT, USA

Kevin V. Cavanagh Weatherhead School of Management, Case Western Reserve University, Cleveland, OH, USA

Emma Climie Werklund School of Education, University of Calgary, Calgary, AB, Canada

Cassandra L. Colbert University of Illinois, Urbana-Champaign, IL, USA

Susanne A. Denham Department of Psychology, George Mason University, Fairfax, VA, USA

Annamaria Di Fabio Department of Education and Psychology, University of Florence, Florence, Italy

Fabrice Dosseville Normandie Université, Caen, France

Joan C. Duffell Committee for Children, Seattle, WA, USA

Maurice J. Elias Rutgers University, Piscataway, NJ, USA

Dorothy L. Espelage Department of Psychology, University of Florida, Gainesville, FL, USA

Marina Fiori University of Lausanne, Lausanne, Switzerland

Igor Grossmann University of Waterloo, Waterloo, ON, Canada

Jessica D. Hoffmann Yale Center for Emotional Intelligence, Yale University, New Haven, CT, USA

Neil Humphrey Manchester Institute of Education, University of Manchester, Manchester, UK

Alex C. Huynh University of Waterloo, Waterloo, ON, Canada

Zorana Ivcevic Yale Center for Emotional Intelligence, Yale University, New Haven, CT, USA

Kateryna V. Keefer Department of Psychology, Trent University, Peterborough, ON, Canada

Matthew T. King University of Illinois, Urbana-Champaign, IL, USA

Sylvain Laborde Department of Performance Psychology, German Sport University Cologne, Cologne, Germany
University of Caen, Caen, France

Gerald Matthews University of Central Florida, Orlando, FL, USA

Stella Mavroveli Imperial College London, London, UK

Adam McCrimmon Werklund School of Education, University of Calgary, Calgary, AB, Canada

Janine Montgomery Department of Psychology, University of Manitoba, Winnipeg, MB, Canada

Emma Mosley Solent University, Southampton, UK

Adrijana Mrsic Department of Performance Psychology, German Sport University Cologne, Cologne, Germany

Samuel J. Nayman Rutgers University-New Brunswick, New Brunswick, NJ, USA

Harrison Oakes University of Waterloo, Waterloo, ON, Canada

James D. A. Parker Department of Psychology, Trent University, Peterborough, ON, Canada

K. V. Petrides London Psychometric Laboratory, University College London, London, UK

Donald H. Saklofske Department of Psychology, University of Western Ontario, London, ON, Canada

Maria-Jose Sanchez-Ruiz Lebanese American University, Beirut, Lebanon

Alex B. Siegling University College London, London, UK

Laura J. Summerfeldt Department of Psychology, Trent University, Peterborough, ON, Canada

Robyn N. Taylor Department of Psychology, Trent University, Peterborough, ON, Canada

Ashley K. Vesely-Maillefer University of Lausanne, Lausanne, Switzerland

Michelle Ward Department of Psychology, University of Manitoba, Winnipeg, MB, Canada

Moshe Zeidner University of Haifa, Haifa, Israel

About the Editors

Kateryna V. Keefer, Ph.D., is a Senior Lecturer in the Department of Psychology at Trent University (Ontario). She received her Ph.D. in Social and Personality Psychology from Queen's University (Ontario). Her research program focuses on the development, assessment, and role of socioemotional competencies in promoting coping, resilience, health, and well-being across the lifespan. She is also interested in student characteristics and educational practices that enhance students' academic engagement and attainment. As an emerging scholar, Dr. Keefer has published over 30 journal articles and book chapters on the topics of emotional intelligence, resilience, mental health, student success, and psychological assessment, and delivered numerous invited talks and conference presentations on these topics.

James D. A. Parker, Ph.D., is a Professor in the Department of Psychology at Trent University (Ontario). He received his Ph.D. in Psychology from York University (Ontario). He was a Research Fellow in the Department of Psychiatry at the University of Toronto before coming to Trent University in 1994. Professor Parker was the Vice President: Research & International at Trent University from 2004 to 2011 and held the Canada Research Chair in Emotion and Health at the university from 2002 to 2013. Professor Parker has published more than 160 articles and chapters, mostly in the areas of emotion, personality, health, and well-being. He is co-author of *Disorders of Affect Regulation* published by Cambridge University Press, the *Handbook of Emotional Intelligence* published by Jossey-Bass, and *Assessing Emotional Intelligence* published by Springer.

Donald H. Saklofske, Ph.D., is a Professor in the Department of Psychology at the University of Western Ontario, Adjunct Professor at the University of Calgary and at the University of Saskatchewan, Visiting Professor in the Faculty of Psychology at Beijing Normal University (China), and a Research Member in the Laboratory for Research and Intervention in Positive Psychology and Prevention

at the University of Florence (Italy). Dr. Saklofske's research interests are focused on individual differences in intelligence and personality with a current emphasis on emotional intelligence, resiliency, psychological health, and building capacity in service delivery. He has published more than 200 journal articles, 35 books, and 100 book chapters. He is editor of *Personality and Individual Differences* and the *Journal of Psychoeducational Assessment* and is an elected Fellow of the Association for Psychological Science, Canadian Psychological Association, and Society for Personality and Social Psychology.

Chapter 1

Three Decades of Emotional Intelligence Research: Perennial Issues, Emerging Trends, and Lessons Learned in Education: Introduction to *Emotional Intelligence in Education*



Kateryna V. Keefer, James D. A. Parker, and Donald H. Saklofske

Abstract Education is one of the largest applied areas for the construct of emotional intelligence (EI). The emphasis on social-emotional learning (SEL) is rapidly growing at all levels of the education delivery system, from preschool and secondary school curricula to post-secondary, professional, and continuing education programs. The book *Emotional Intelligence in Education* brings together leading world experts in the fields of EI and SEL to highlight current knowledge, new opportunities, and outstanding challenges associated with scientifically based applications of EI in education. In this introductory chapter to the book, we take stock of almost three decades of EI research, addressing three common concerns: (1) that EI is nothing more than old wine in new bottles, (2) that EI is poorly defined and measured, and (3) that claims about the importance of EI for various life success outcomes are dramatically overblown. We also highlight a number of new and emerging trends that point to the increasing maturity of the EI field as an area of study. Having taken the pulse of the chapters comprising the book, we propose that the field of EI would benefit from paying greater attention to the social context within which EI operates.

It is often said that psychology has a long past but a short history; the same dictum applies to the construct of “emotional intelligence.” Although others had used the term earlier (e.g., Greenspan, 1989; Leuner, 1966), the contemporary origins of “emotional intelligence” come from a pivotal paper by Salovey and

K. V. Keefer (✉) · J. D. A. Parker
Department of Psychology, Trent University, Peterborough, ON, Canada
e-mail: katerynakeefer@trentu.ca; jparker@trentu.ca

D. H. Saklofske
Department of Psychology, University of Western Ontario, London, ON, Canada
e-mail: dsaklofs@uwo.ca

Table 1.1 Number of EI-related papers in Web of Science (1990 to November 2017)

Time period	Number of papers	% of total
1986–1990	1	<0.1
1991–1995	6	0.1
1996–2000	108	2.3
2001–2005	447	9.7
2006–2010	1050	22.8
2011–2015	2142	46.5
2016–November 2017	857	18.6

Mayer published in 1990. To introduce their “new” construct, Salovey and Mayer proposed that emotional intelligence (EI) consisted of three broad and interrelated abilities: (1) the appraisal and expression of emotion, (2) the regulation of emotion, and (3) the utilization of emotion to motivate and plan. In proposing the construct, the authors drew on a prior literature from a variety of areas – particularly clinical, cognitive, educational, and personality psychology – suggesting that EI was part of a long-standing tradition within the intelligence area of researchers exploring people’s specific “intelligences” within subareas like “social behavior” and “emotion.” Although interest in Salovey and Mayer’s new construct developed somewhat gradually (as will be outlined below), it is clear that EI has grown to become a substantial research area over the past decade. Using the Thomson Reuters’ Web of Science database, Table 1.1 presents the number of research papers, by half-decade intervals, from 1986 to November 2017 using “emotional intelligence” in either the publications’ keywords, title, or abstract. Of the 4611 EI-related papers in the database, the vast majority (65%) were published since 2010.

Salovey and Mayer (1990) had originally predicted that EI could become a major research area, since they believed that the construct had considerable “heuristic value in drawing together literatures that are often left unintegrated” (p. 200). If we break down the 4611 papers from Table 1.1 into the Web of Science’s broad set of “research areas,” it would appear that Salovey and Mayer were quite right to foresee that the EI construct would appeal to researchers in a multitude of fields. Table 1.2 presents the proportion of papers in the top 10 research areas, representing the vast majority of published papers. Apart from the sizable body of EI-related work within the general psychology field (48.8% of published papers), a substantial body of work has also evolved in applied fields like business/economics (16.6% of papers), education (13.5% of papers), and health (12.8% of papers). The large number of EI papers directly connected to education ($N = 622$) is just one important indicator of the need to take stock of current issues and trends in this area – a key goal of this book.

Although a large EI literature has now evolved, it is interesting to note that almost from the start when this construct was introduced, it was met with a sizeable critical response (for early examples of critiques, see Davies, Stankov, & Roberts, 1998; Fisher & Ashkanasy, 2000; Izard, 2001; Newsome, Day, & Catano, 2000; Pfeiffer,

Table 1.2 Proportion of EI-related papers by Web of Science research area (top 10)

Rank	Topic	<i>N</i>	%
1	Psychology	2252	48.8
2	Business/economics	766	16.6
3	Education	622	13.5
4	Social sciences other	308	6.7
5	Psychiatry	306	6.6
6	Nursing	199	4.3
7	Computer science	188	4.1
8	Neurosciences/neurology	179	3.9
9	Engineering	135	2.9
10	Healthcare sciences/services	87	1.9

2001; Roberts, Zeidner, & Matthews, 2001; Sternberg, 1999; Thingujam, 2002). While the EI area has grown exponentially over the past three decades in diverse disciplines (e.g., psychology, business, education, and psychiatry), the critical response has tended to focus on three recurrent concerns: (1) that EI is nothing more than a new name for related constructs that have been studied for many decades, (2) that EI is poorly defined and measured, and (3) that claims about the importance of EI for various life success outcomes are dramatically overblown (for the most detailed example of this type of critical response, see Murphy, 2006). As we solicited, edited, and contributed chapters to this book, these perennial concerns about EI were foremost on our minds to be addressed. Before we introduce the themes and chapters presented in this book, it is important that we first address these three common criticisms about EI.

Perennial Issues and Emerging Trends

EI: Old Wine in New Bottles?

Although EI has a relatively short history as a discrete construct, overlapping and related constructs can be traced back to the beginnings of the twentieth century. The most obvious example is the concept of “social intelligence,” which was first introduced by Thorndike in 1920 as the “ability to understand and manage people.” The new concept quickly spawned a very rich literature (see the review by Thorndike & Stein, 1937 for evidence of how large and nuanced the early work on social intelligence had become) that foreshadows many conceptual developments to come later in the century. A case in point is the model of social intelligence used by Moss et al. (1927) to develop a new test for social intelligence. This multifaceted measure had separate subscales to assess judgment in social situations, recognition of the mental state of the speaker, memory for names and faces, sense of humor, and identification of emotional expression. Specific items and tasks on this Social Intelligence Test were very similar to those used in recently developed measures of EI abilities (e.g., Mayer,

Salovey, & Caruso, 2002). Landy (2006) makes a very compelling argument that most of the core constructs linked to the recent EI area can be traced directly back to the social intelligence literature of the 1920s and 1930s.

Ultimately, the issue of EI being old wine in new bottles is a problem mostly for those concerned with priority claims in psychology (Gross, 1998) – a partisan and small group at most. As historians of psychology have long noted, with “objective” moments of discovery quite rare in the discipline, fixating on priority claims for constructs like EI is very much an intellectual dead end (see Danziger, 1994, and Smith, 1988, for detailed discussions of this issue with a number of key concepts in psychology). Perhaps what is more important to take note of, however, is that for over a century now a cyclical pattern of events has taken place with respect to EI-related constructs. One cohort of researchers documents the importance of emotional and social competencies for various life success outcomes, only to have these insights fade from the zeitgeist as more pressing research priorities and topics take hold. Time passes, and then a new cohort of researchers “discovers” the importance of EI-related competencies for a new generation. Rather than worry about priority claims in the EI area, perhaps the bigger question is why various generations of psychologists, and those working in allied fields, periodically lose sight of the important relationship between EI-related competencies and life success (Kaufman & Kaufman, 2001). What is it about a discipline where the need to “discover” new psychological concepts dooms it to constantly squander precious research time and resources?

It is important to acknowledge that research paradigms are influenced by the wider sociocultural, economic, and political currents of their place and time. Indeed, the old-wine-in-new-bottles argument can be similarly extended to the current applications of EI in the education sector under the trademark of “social-emotional learning” (SEL; Durlak, Domitrovich, Weissberg, & Gullotta, 2015). The widespread implementation of school-based SEL programs is part of a broader “character education” movement aimed at “helping young people become responsible, caring, and contributing citizens” (Character Education Partnership; <http://www.character.org>). It has been said that “character education is as old as education itself” (Lickona, 1991, p. 6), with both religious (e.g., “moral” education) and secular roots (e.g., “civic” education), and a common goal of rectifying or preventing pressing societal problems like underachievement, unemployment, violence, criminality, poverty, and public health. In reviewing the history of character education in the USA, Sojourner (2012) points out how various societal trends have contributed to the temporary abandonment of character education in the 1960s and 1970s, as well as its resurgence in the late 1980s and increased momentum throughout the 1990s. The tenets behind the twenty-first century SEL movement are very much aligned with the general goals of character education: to develop “the whole child” and stave off societal crises (see Chap. 12 by Elias, Nayman, & Duffell, this volume). What seems to set it apart from earlier iterations is the increased emphasis on rigorous program evaluation research and evidence-based practice (see Chap. 8 by Humphrey, this volume).

EI: Poorly Defined and Measured?

Conceptual Heterogeneity Since Salovey and Mayer (1990) published their original EI model, a variety of alternative conceptualizations have been proposed for the EI construct, some substantially more varied than others (Stough, Saklofske, & Parker, 2009). Most models, however, continue to share the core elements introduced in 1990, namely, that EI involves competencies of perceiving, understanding, and managing emotions and that these competencies can be exercised both intrapersonally (i.e., dealing with one's own emotions) and interpersonally (i.e., dealing with emotions of others). All EI models implicitly posit these competencies to have important implications for constructive problem solving and psychosocial adaptation (for detailed reviews of EI models, see Mayer, Roberts, & Barsade, 2008; Zeidner, Roberts, & Matthews, 2008).

While there has been general agreement about the types of competencies involved in EI, one of the most divisive issues in the EI area, and certainly a factor contributing to the perception that EI is a poorly defined construct, is the coexistence of two conceptually distinct approaches to defining the key competencies. In one key approach, EI is viewed as a set of emotion-related abilities, congruent with how cognitive intelligence is generally conceptualized (reviewed in Chap. 2 by Fiori and Vesely-Maillefer, this volume). In the other approach, EI is treated as a set of emotion-related personality and behavioral dispositions that can be self-reported or observed by others (reviewed in Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). Early EI research is quite a confusing body to interpret, since the two approaches were often treated as interchangeable (Zeidner et al., 2008), yet they produced divergent results. Petrides and Furnham (2001), in an influential paper in the EI area, proposed the conceptual distinction between "ability EI" and "trait EI" for the two broad approaches, which has considerably disambiguated the field. Subsequent empirical work in the EI area has tended to be explicit about whether the measured EI variables are abilities or traits.

The conceptual distinction between ability and trait EI derives from their methods of measurement. Ability EI is assessed with performance-based tests where individuals respond to stimuli or solve problems designed to estimate their maximal level of knowledge and aptitude (e.g., Mayer, Salovey, & Caruso, 2002). Trait EI is measured with self-report questionnaires designed to tap into individuals' typical behaviors, values, and self-concepts (e.g., Bar-On, 1997; Petrides, 2009). Accordingly, ability EI resides within the intelligence domain and overlaps with other forms of cognitive abilities (Mayer, Caruso, & Salovey, 1999; MacCann, Joseph, Newman, & Roberts, 2014), whereas trait EI is part of the personality hierarchy and overlaps with basic personality traits (Petrides, Pita, & Kokkinaki, 2007). Knowing their distinctive nomological networks, it is not surprising that ability and trait EI measures have been found to correlate only weakly to moderately with each other and to relate differentially to a host of other constructs and outcome criteria (Brackett & Mayer 2003; Van Rooy & Viswesvaran, 2004; Zeidner, Shani-Zinovich, Matthews, & Roberts, 2005).

There is now a wide consensus that the ability and trait approaches to EI are complementary rather than a sign of confusion in the field and that both ought to be included in EI research and theorizing (Hughes & Evans, 2016; Roberts, MacCann, Guil, & Mestre, 2016; Schutte, Malouff, & Hine, 2011; Petrides, 2011). In fact, the present decade is witnessing a paradigm shift toward more integrative approaches, with several research groups putting forth models that incorporate EI abilities *and* EI traits within a unified theoretical framework (Boyatzis, 2009; Cherniss, 2010; Matthews, Zeidner, & Roberts, 2012; Mikolajczak, 2009). These integrative models recognize that scores on ability and trait EI measures reflect distinct strata of a person's overall EI profile. Tests of ability EI tend to capture individuals' explicit knowledge about emotions and about emotionally "intelligent" ways of dealing with them, along with their ability to apply that knowledge when instructed to do so. However, knowing what to do and having the aptitude for emotionally intelligent behavior offers no guarantee that a person will act on it in practice. Indeed, individuals may have solid EI knowledge and abilities that they can demonstrate on a structured EI test but lack the propensity, self-efficacy, or practice opportunities to apply them routinely in their day-to-day behaviors. Because trait EI instruments attempt to capture individual's EI at the behavioral manifestation level (i.e., what people *typically* do), what they end up measuring often reflects a "mix" of EI-related competencies, attitudes, self-concepts, and dispositions.

Articulating the conceptual differences between ability and trait EI has been especially helpful in making sense of the "messy" research on EI's criterion validity (discussed in a later section). The distinction between "knowing what to do" and "actually doing it" is also prominent in the models of change underpinning many successful EI interventions, which recognize that teaching EI knowledge and skills alone is not enough; the new learning must be accompanied by regular practice opportunities and reinforcing feedback in order to produce lasting behavioral change at the dispositional (trait EI) level (see Chap. 15 by Boyatzis & Cavanagh, this volume; Chap. 11 by Laborde, Mosley, Ackermann, Mrsic, & Dosseville, this volume; Chap. 14 by Vesely-Maillefer & Saklofske, this volume).

The integrative approach has also jump-started several new research lines exploring the dynamics between EI abilities and traits, including their differential developmental trajectories (e.g., Keefer, Holden, & Parker, 2013), reciprocal influences on each other (e.g., Schutte & Malouff, 2012), as well as additive and interactive effects on life outcomes (e.g., Hughes & Evans, 2016; Salguero, Extremera, Cabello, & Fernández-Berrocal, 2015). In pursuing these research questions, EI researchers have made new connections to other domains of individual differences (beyond the "home" bases of intelligence and personality), including the rich literature on social-cognitive constructs such as self-efficacy (Alessandri, Vecchione, & Caprara, 2015) and self-concept (Keefer, 2015).

In sum, most researchers in the EI area see the multiplicity of EI models as a healthy indicator of a relatively new and generative research area (Austin, Parker, Petrides, & Saklofske, 2008; Petrides et al., 2016). A subgroup of scholars, however, continue to interpret this situation as an ongoing problem that can only be resolved when the EI area rejects the trait approach and unites around the ability

model (Antonakis & Dietz, 2010; Mayer, Caruso, & Salovey, 2016). If we use the general intelligence area as a relevant analogy, it is quite clear that a discipline can handle a multiplicity of conceptual models. After 100+ years of work on intelligence, it is worth noting that conceptual hegemony is still far from sight (i.e., Cattell, 1987; Sternberg, 1985). Yet the area continues to flourish with a diversity of conceptual models – some of them theoretically quite incompatible with each other (Flanagan & Harrison, 2012).

Measurement Challenges Fueling the lingering perception in the literature that EI is poorly conceptualized (e.g., Antonakis, 2004) is the inevitable methodological baggage associated with the assessment approaches for both ability and trait EI. With respect to ability EI tests, concerns have been expressed about the validity of the right-or-wrong scoring format (Brody, 2004), particularly when these tools are used in very different cultural groups (Fernández-Berrocal & Extremera, 2006; see also Chap. 5 by Huynh, Oakes, & Grossmann, this volume). With correct answers usually determined by consensus with the majority, some scholars have also questioned whether high scores may reflect conformity to social norms rather than any form of intelligence (Matthews, Emo, Roberts, & Zeidner, 2006). In addition, the hypothetical scenarios and static stimuli used in most of these tests may have poor generalizability to the dynamic interactions of real life (for a detailed discussion of issues associated with ability EI measures, see Chap. 2 by Fiori & Vesely-Maillefer, this volume).

Given the widespread use of self-report measures within the trait EI approach, many writers have stressed the inappropriateness of using self-reports for assessing actual EI abilities, due to the well-known systematic biases that plague people's estimates of their own competencies (Dunning, Heath, & Suls, 2004; Freund & Kasten, 2012; see also Keefer, 2015, for a detailed discussion of issues associated with self-report EI measures). Neither is the use of EI questionnaires appropriate in high-stakes assessments, where the responses can be easily faked (Day & Carroll, 2008; Grubb & McDaniel, 2007). Other critics have raised concerns over the "mixed" content of trait EI measures due to their overlap with measures of basic personality and other motivation variables (Brackett & Mayer, 2003).

Again, the general intelligence area offers important perspective about the assessment of EI. While the intelligence researchers have been developing assessment tools for well over a century, ongoing gaps and major shortcomings (see Ackerman, 2017) are a reminder about how difficult it is to develop valid and reliable measures for core human competencies. Critics of the EI area have long been quick to highlight psychometric problems with assessment tools for the construct (e.g., Brody, 2004; Davies et al., 1998; Newsome et al., 2000; Roberts et al., 2001). In many ways, it is quite understandable that many commonly used assessment tools in the EI area have their limitations. They are all first-generation measures for the construct.

While the first generation of EI measures are quite varied with respect to their psychometric properties (Zeidner et al., 2008), it is important to point out that it was the development of tools like Bar-On's (1997) Emotional Quotient Inventory (EQ-i),

Schutte et al.'s (1998) self-report EI scale, and the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2002) that propelled the substantial expansion of published work on EI documented in Table 1.1. If one looks at the 10 most frequently cited papers among those included in Table 1.1, it is interesting to note that half of them appeared at the turn of the millennium and introduced or highlighted new EI measures (e.g., Mayer, Salovey, Caruso, & Sitarenios, 2003; Petrides & Furnham, 2000, 2001; Schutte et al., 1998; Wong & Law, 2002). These empirical facts should refute a common origin myth in the EI area that the publication of Goleman's (1995) popular book on EI precipitated the dramatic growth of research on the topic (e.g., McCleskey, 2014; Pérez, Petrides, & Furnham, 2005; Sjöberg, 2001). As indicated in Table 1.1, relative to the period after 2000, the 1990s actually produced a very small body of EI work (2.5% of published papers). The new area needed the arrival of assessment tools linked explicitly to the EI construct for broad research interest to take hold.

Although the first-generation tools like the EQ-i and MSCEIT continue to be widely used and have been updated and revised, the past decade has also seen the development of second-generation ability and trait EI measures in attempts to address the limitations of their predecessors. These developments are especially welcome for the area of ability EI, where the MSCEIT was the only available test for a long time. The new wave of ability EI tests utilize more ecologically valid multimedia presentations of emotion stimuli and scenarios (for a review, see Chap. 2 by Fiori & Vesely-Maillefer, this volume) and have started to explore alternative theory-driven methods of scoring (Mestre, MacCann, Guil, & Roberts, 2016).

Recent efforts in the assessment of trait EI have been directed at creating tools that are less "mixed" and more tightly aligned with a particular theoretical paradigm. For example, Petrides' (2009) Trait Emotional Intelligence Questionnaire (TEIQue) is theoretically connected to the Big Five model of personality (McCrae & John, 1992) and assesses emotion-related aspects of personality. Questionnaires like the Emotional Self-Efficacy Scale (Kirk, Schutte, & Hine, 2008) and the Regulatory Emotional Self-Efficacy Scale (Caprara et al., 2008) are informed by Bandura's (1997) social-cognitive theory and assess competence beliefs in relation to specific EI abilities. Of note, the titles of these newer trait EI scales make it explicitly clear that these are not measures of "intelligence."

Another emerging trend includes the development of more differentiated assessments of specific EI competencies. For example, the Profile of Emotional Competence (Brasseur, Grégoire, Bourdu, & Mikolajczak, 2013) assesses EI competencies separately for the intrapersonal and interpersonal domains, which are often conflated with each other in other measures. Separate scales have also been created to assess EI competencies in relation to discrete emotions (e.g., anger, sadness, fear, shame, guilt; see Caprara, Di Giunta, Pastorelli, & Eisenberg, 2013). The emergence of these highly differentiated tools reflects a maturing research area that is ready to move beyond the crude index of "global" EI toward more nuanced, multidimensional, and person-centered predictive models (Keefer, Parker, & Wood, 2012; Parker, Keefer, & Wood, 2011).

EI: Overblown Importance?

The Criticisms The criticism that the importance of EI for life success has been exaggerated, or at the very least over extended, is a fair comment for the first decade of the EI research. How could it not be? As documented in the previous section, the first measures for the EI construct did not appear in the peer-reviewed literature until the late 1990s. Thus, a great deal of the enthusiasm for EI during the 1990s was undoubtedly connected to the theoretical and applied potential of the construct. Virtually all of the early empirical work was indirect, capitalizing on assessment tools and measures developed for other constructs. For example, in an early paper on the clinical implications of the EI construct, Parker (2000) focused on the large prior clinical and psychiatric literature on alexithymia (Sifneos, 1973). Alexithymia is an older construct with clear theoretical connections to EI (Taylor, Parker, & Bagby, 1999), and one of several pre-existing literatures Salovey and Mayer drew heavily upon when they first proposed the EI construct in 1990.

The scarcity of reliable and valid EI measures did not go unnoticed to early commentators and reviewers of the EI area (e.g., Davies et al., 1998; O'Connor & Little, 2003; Roberts et al., 2001). To say that these writers were critical of the state of EI assessment is an understatement. Writing about the EI area in 2001, Zeidner, Matthews, and Roberts wrote that “It remains to be seen whether EI, like the canals of Mars, is the product of the tendency of even expert observers to see, in complex data, patterns that do not exist” (p. 227). While the views of these specific researchers appear to have softened with respect to EI measures (e.g., Matthews, Zeidner, & Roberts, 2012), negative perceptions persist, with many still blaming the early “hype”: “Goleman’s claims have done considerable harm to the field” (Antonakis, Ashkanasy, & Dasborough, 2009, p. 247).

The ongoing writings on EI by Antonakis and colleagues is a good example of the persistence of negative schema about the construct, regardless of the fact that the measurement literature is vastly improved from 2000. Writing in 2004 about the usefulness of the EI construct for business (and citing all of the sources from the previous paragraph), Antonakis echoed serious concerns about the measurement of the EI construct: “It is unconscionable that organizations might be basing their hiring, promotion, or retention decisions wholly or in part on EI models – models that simply do not have enough scientific backing to be used in industrial settings. Thus, it is imperative that future research be conducted using rigorous tests to determine whether EI really matters” (p. 172). A decade later, and almost 2000 more published papers, the bottom line for Antonakis and colleagues is that the EI area has yet to produce a valid assessment tool (Fiori & Antonakis, 2012).

The Evidence While the EI area continues to have its critics, the research has matured substantially from its first decade. With the accumulation of a large body of studies on similar outcome variables (and using comparable assessment tools), researchers have begun to systematize the links between EI and important life success variables. Much of the meta-analytic evidence to date pertains to trait EI, as it

has produced considerably more research studies than ability EI. The bottom line from this meta-analytic work is that individuals high in trait EI tend to enjoy greater subjective well-being ($r = 0.38$) and quality of intimate relationships ($r = 0.32$), suffer from fewer physical and mental health problems ($r = 0.34$), and achieve higher academic ($r = 0.20$) and occupational ($r = 0.30$) performance (Malouff, Schutte, & Thorsteinsson, 2014; Martins, Ramalho, & Morin, 2010; O'Boyle, Humphrey, Pollack, Hawver, & Story, 2011; Perera & DiGiacomo, 2013; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016).

Although the moderate magnitude of these effect sizes may seem underwhelming, there are several reasons to take these findings to heart. First, it is important to remember that broad life outcomes – such as overall health, academic achievement, or occupational performance – are products of numerous interacting factors reflecting both individual characteristics and environmental influences. As such, any single factor alone can only explain a small portion of the outcome variance, and its effects are likely to be moderated by a host of other variables. Put in perspective, the effect sizes found for trait EI are comparable to those of other well-established personality constructs in relation to the same criteria (DeNeve & Cooper, 1998; Judge & Bono, 2001; Hurtz & Donovan, 2000; Poropat, 2009).

Of course, trait EI overlaps with basic dimensions of personality, which raises the question of whether it can explain incremental criterion variance over and above basic personality. One of the meta-analyses cited above (O'Boyle et al., 2011) included tests of incremental validity and found that measures of trait EI explained an additional 6.8% of variance in job performance beyond cognitive intelligence and the Big Five personality traits. Another study (Andrei, Siegling, Aloe, Baldaro, & Petrides, 2016) meta-analyzed incremental validity studies of trait EI (as measured with the TEIQue) and found that the TEIQue scores consistently explained an additional 6% of variance in a range of mental health criteria beyond basic personality and other variables (e.g., optimism, cognitive ability). These findings should alleviate the common concern that trait EI is redundant with other personality constructs and provide further support for its utility as an independent predictor of life success outcomes.

It is also useful to look beyond the statistical “modesty” of effect sizes and consider their “practical” significance in terms of the personal or economic impacts connected to improvements of even a few percentage points. An illustration of this issue in the health domain was provided by Mikolajczak et al. (2015; Mikolajczak & Van Bellegem, 2017) based on their analyses of 12 years of health insurance records for a population-based sample from Belgium. These researchers reported significant but weak associations (r 's < 0.20) between trait EI and objective health outcomes (e.g., fewer doctor visits, shorter hospitalizations, reduced use of medications). Yet based on these associations, every 1% increase in trait EI was estimated to yield a 1% decrease in healthcare expenditures, amounting to a difference of two billion euros in annual health costs between those with above-average versus below-average trait EI. In the world of public policy, this would be considered a worthwhile return on investment (Mikolajczak & Van Bellegem, 2017). Similar economic impact analyses have been conducted in the education sector for school-based SEL

programs, which have been shown to produce significant but weak effects ($r = 0.11$ – 0.13) on students' social behavior and academic performance (Durlak et al., 2011), yet their economic return is estimated to be \$11 for every dollar invested in a school program (Belfield et al., 2015). In fact, effect sizes as low as $r = 0.10$ have been suggested to be of potential policy interest, particularly for objective and difficult to change outcomes such as academic grades (Durlak, 2009).

The few meta-analyses that included studies of ability EI have found significant but weaker associations compared to those of trait EI, linking higher scores on ability EI measures to greater subjective well-being ($r = 0.22$), fewer physical and mental health problems ($r = 0.17$), and higher occupational performance ($r = 0.24$) (Martins et al., 2010; O'Boyle et al., 2011; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016). Although they had no direct data to support the idea, Salovey and Mayer (1990) speculated at the end of their seminal paper introducing the EI construct that the "person with emotional intelligence can be thought of as having attained at least a limited form of positive mental health" (p. 200). Almost 30 years later, the empirical evidence has borne out their cautious predictions but also revealed trait EI measures to be stronger predictors of life outcomes relative to ability EI measures. In a recent theoretical update of their ability EI model, Mayer et al. (2016) acknowledged that EI abilities cannot be expected to "correspond neatly" to emotionally intelligent behavior and that they need to be considered in tandem with personality dispositions when predicting outcome criteria.

So where does the evidence leave us with respect to EI's importance in life? The hard numbers reviewed in this section indicate that it would be prudent for researchers to tone down their expectations about how much variance EI measures can explain in statistical predictive models (e.g., about 6% of incremental variance for trait EI, and even less for ability EI). At the same time, one must be careful not to dismiss entirely the very real practical implications of higher versus lower EI traits and abilities for the individuals and the society. As cogently summed up by Mayer et al. (2016), "the prediction from intelligence to individual instances of 'smart' behavior is fraught with complications and weak in any single instance... At the same time, more emotionally intelligent people have outcomes that differ in important ways from those who are less emotionally intelligent." (Mayer et al., 2016; p. 291).

With new and refined EI measures and conceptual models being actively developed, the next big task for EI researchers is to establish EI's causal role in the associated outcomes. The overwhelming majority of research being conducted in this area is still correlational, and more randomized controlled experiments and longitudinal designs are sorely needed.

Lessons Learned from Applications of EI in Education

Despite all the theoretical and methodological challenges, the construct of EI has had an undeniable impact on the applied area of education. At the turn of the twenty-first century, scholars commenting on the early attempts to implement EI programs

in schools expressed strong concerns over their dubious theoretical foundations and limited or entirely lacking evaluation research (Zeidner, Roberts, & Matthews, 2002). Today, SEL is an internationally recognized trademark for hundreds of classroom curricula and school-wide programs unified within a common (albeit rather loose) conceptual framework (Collaborative for Academic, Social, and Emotional Learning; <https://casel.org>) and, more importantly, supported with rigorous evidence base (Durlak et al., 2015). A seminal meta-analysis of over 200 randomized controlled trials of universal school-based SEL programs supported their overall efficacy in boosting students' socioemotional competencies and improving their behavioral, social, academic, and well-being outcomes (Durlak et al., 2011). Of course, not all SEL programs are created equal, and the quality of implementation does matter (see Chap. 8 by Humphrey, this volume), but these controlled intervention studies illustrate what is possible.

It appears that while EI researchers were debating over definitions and effect sizes, applied researchers and educators devised an EI-infused recipe for making positive change in children's lives. Of course, the causal role of EI in these programs is difficult to ascertain due to the complex network of factors, processes, and mechanisms involved in the delivery of a whole-school SEL intervention. All we can infer is that there is a common set of ingredients that produces positive changes in both EI competencies and other behavioral outcomes. Given that the criterion validity of EI has proven to be moderate at best, it is likely that the EI area as a whole has overlooked some key variable(s) in its explanations of the EI-life success nexus. As we gathered and edited contributions to this book from leading experts in the fields of both EI and SEL, we searched for clues as to the possible missing ingredients. This process has led us to consider the fundamental tacit assumptions that have governed thought and research in the two fields.

We observed that mainstream EI researchers have tended to adopt an individual differences perspective, where EI is treated almost exclusively as a predictor variable for other outcomes, with little consideration given to reverse causality or reciprocal influences. Researchers operating within this paradigm are preoccupied with three main issues: (1) measurement, because EI is assumed to be a relatively stable (and therefore measurable) property of individuals; (2) construct validity, dominated by efforts to differentiate EI from other individual differences constructs (e.g., cognitive intelligence, basic personality); and (3) criterion validity, investigated primarily through correlational research designs. Researchers working from this perspective are more likely to view EI as a universally adaptive property, in that higher EI is assumed to be linearly related to more positive outcomes. This latter assumption is especially true of ability EI models and some (but not all, see Petrides, 2009) trait EI models that include adaptiveness in their very definition (e.g., Bar-On, 1997). Viewed through this individualizing lens, low EI is interpreted to mean that something is lacking *within* the person (e.g., poor skills or lack of motivation or confidence to use them), and so the chief approach to intervention is to directly target these psychological processes within the individual.

In contrast, we noted that educational and SEL researchers have tended to view EI through a developmental lens, where EI is treated not only as a predictor of other variables but also as an important outcome in its own right, with bidirectional influences assumed to be the norm rather than exception. Researchers operating within this paradigm are concerned with identifying factors and mechanisms (both within and outside the individual) that contribute to EI's development over time, utilizing a mix of longitudinal, experimental, and intervention research designs. Moreover, educational researchers tend to adopt an interactionist perspective that explicitly recognizes the role of broader socio-cultural and contextual influences on an individual's behavior. From this perspective, adaptiveness is necessarily viewed in context: what might be considered as abnormal behavior under normal circumstances may have developed as a normal adaptive response to abnormal circumstances. Viewed through this ecological lens, low EI is interpreted to mean that something failed to *happen* to the individual (e.g., lack of appropriate role models, practice opportunities, reinforcements), and so the chief approach to intervention is to modify the social environment which would then facilitate changes at the individual level. Indeed, provision of supportive interpersonal interactions and positive classroom and school climates is regarded as a necessary active ingredient in effective school-based SEL programs (see Chap. 7 by Hoffmann, Ivcevic, & Brackett, this volume; Chap. 8 by Humphrey, this volume).

By bringing the EI and SEL perspectives under the same roof, this book aims to highlight both the contrasts and the points of intersection between these two paradigms, with the hope of facilitating their greater integration and mutual advancement. Indeed, what one paradigm does well, the other tends to overlook and vice versa. For example, the mainstream EI research could benefit from more longitudinal and experimental research designs to better address the issue of causality. Conversely, the SEL practice would be strengthened by greater conceptual clarity (particularly with respect to the ability-trait distinction) when assessing EI competencies and evaluating program outcomes. But if there is one major lesson for EI researchers to be learned from education, it is the pressing need to pay greater attention to the social context within which EI operates and which moderates EI's effects on life success outcomes. This latter sentiment runs as a consistent chorus throughout *every* chapter in this book, accompanied by an accord of growing dissatisfaction with the individualizing paradigm on all fronts – conceptual, measurement, and predictive (e.g., Chap. 2 by Fiori & Vesely-Maillefer, this volume; Chap. 5 by Huynh, Oakes, & Grossmann, this volume; Chap. 4 by Zeidner & Matthews, this volume). Once again, this signals a new level of maturity for the EI field. To facilitate a true paradigm shift, we encourage EI researchers to consider social contextual influences not merely as add-ons to the existing individual-focused models but rather as the foundational ingredients that are built into the models up front and constitute the defining assumption of the new look on EI.

Scope of this Book

There are many topical areas of research that would undoubtedly be relevant to the subject of EI in education, including academic emotions, emotion regulation, resilience, and, of course, SEL. We chose to limit the scope of this book to the literature explicitly linked to EI theory and measurement, supplemented with selected SEL topics, for several reasons. First, many of the concepts listed above have been covered in recently published handbooks dedicated to that specific area (e.g., Durlak et al., 2015; Goldstein & Brooks, 2013; Gross, 2014; Pekrun & Linnenbrink-Garcia, 2014) – which further attests to the timeliness of the present volume. Rather than duplicating those efforts here, we refer the reader to those respective texts instead. Second, we wanted to take stock of the EI field as it approaches the end of its third decade, highlighting current knowledge, new opportunities, and outstanding challenges associated with its scientifically based applications. We chose to focus on education because it is one of the most active areas where EI is currently being applied (second only to business/economics), and because EI applications through SEL provide a valuable feedback loop to reflect further on the nature and workings of EI.

This book is organized in three parts. Part I focuses on the theoretical, measurement, and criterion validity issues concerning EI. The first three chapters represent the theoretical backbone of the EI literature, providing critical but constructive appraisals of ability EI (Chap. 2 by Fiori and Vesely-Maillefer, this volume), trait EI (Chap. 3 by Petrides et al., this volume), and their role in stress and coping – the chief theoretical mechanism through which EI is postulated to exert its effects on life outcomes (Chap. 4 by Zeidner and Matthews, this volume). Chapter 5 (Huynh et al., this volume) is a new voice within the EI literature, but one that we hope will become a theoretical mainstay, as it underscores the very serious pitfalls associated with ignoring the role of culture when attempting to define, assess, and develop EI.

Part II of the book is dedicated to SEL applications in preschool and secondary school contexts. Three of the chapters address crosscutting issues related to developmental considerations (Chap. 6 by Denham & Bassett, this volume); program principles, best practices, and barriers to implementation (Chap. 8 by Humphrey, this volume); and broader sociocultural and policy implications (Chap. 12 by Elias et al., this volume). Three other chapters explore selected special topics in SEL, including bullying prevention and intervention (Chap. 9 by Espelage, King, & Colbert, this volume), atypically developing populations (Chap. 10 by Montgomery, McCrimmon, Climmie, & Ward, this volume), and a relatively new applied area of EI in sports (Chap. 11 by Laborde et al., this volume). Although detailed coverage of specific SEL programs was outside the scope of this book (for comprehensive program reviews, see Durlak et al., 2015), we did include one program-specific chapter on the RULER approach, as it is the only example of a school-wide SEL program that is explicitly derived from EI theory (Chap. 7 by Hoffmann et al., this volume). Most other chapters in this section provide numerous other examples of relevant SEL programs.

Part III of the book extends the educational implications of EI into post-secondary and tertiary education settings, with topics ranging from youth career readiness (Chap. 13 by Di Fabio and Saklofske, this volume) and college success (Chap. 16 by Parker, Taylor, Keefer, & Summerfeldt, this volume), to case examples of preservice EI training programs for future educators (Chap. 14 by Vesely-Maillefer and Saklofske, this volume) and organizational leaders (Chap. 15 by Boyatzis and Cavanagh, this volume).

Given its topical coverage, international expertise, and a balanced emphasis on scientific research and practical applications, we believe this book will be a valuable resource for researchers, policy makers, psychologists, educators, administrators, student support personnel, and professional coaches working at all levels of the education hierarchy, as well as graduate students and professors in developmental, personality, and school psychology, social work, and education.

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Part I
Theory and Measurement

Chapter 2

Emotional Intelligence as an Ability: Theory, Challenges, and New Directions



Marina Fiori and Ashley K. Vesely-Maillefer

Abstract About 25 years ago emotional intelligence (EI) was first introduced to the scientific community. In this chapter, we provide a general framework for understanding EI conceptualized as an ability. We start by identifying the origins of the construct rooted in the intelligence literature and the foundational four-branch model of ability EI, then describe the most commonly employed measures of EI as ability, and critically review predictive validity evidence. We further approach current challenges, including the difficulties of scoring answers as “correct” in the emotional sphere, and open a discussion on how to increase the incremental validity of ability EI. We finally suggest new directions by introducing a distinction between a crystallized component of EI, based on knowledge of emotions, and a fluid component, based on the processing of emotion information.

Research in the domains of psychology, education, and organizational behavior in the past 30 years has been characterized by a resurgence of interest for emotions, opening the door to new conceptualizations of intelligence that point to the role of emotions in guiding intelligent thinking (e.g., Bower, 1981; Zajonc, 1980). Earlier work often raised concern surrounding the compatibility between logic and emotion, and the potential interference of emotion in rational behavior, as they were considered to be in “opposition” (e.g., Lloyd, 1979). Research shifted into the study of how cognition and emotional processes could interact to enhance thinking, in which context Salovey and Mayer first introduced the construct of emotional intelligence (EI). Their initial definition described EI 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” (Salovey & Mayer, 1990, p. 189).

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M. Fiori (✉) · A. K. Vesely-Maillefer
University of Lausanne, Lausanne, Switzerland
e-mail: Marina.Fiori@unil.ch

The definition of EI was heavily influenced by early work focused on describing, defining, and assessing socially competent behavior such as social intelligence (Thorndike, 1920). The attempt 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 in which EI was originally introduced as a subset of social intelligence (Salovey & Mayer, 1990). Further prehistory to EI involved the investigation of the relation of social intelligence to alexithymia, a clinical construct defined by difficulties recognizing, understanding, and describing emotions (e.g., MacLean, 1949; Nemiah, Freyberger, & Sifneos, 1976), as well as research examining the ability to recognize facial emotions and expressions (Ekman, Friesen, & Ancoli, 1980).

EI was popularized in the 1990s 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 at the time to support the "exciting" statements and claims about the importance of EI in understanding human behavior and individual differences (Davies, Stankov, & Roberts, 1998) prompted critiques and further investigation into the construct. Major psychological factors such as intelligence, temperament, personality, information processing, and emotional self-regulation have been considered in the conceptualization of EI, leading to a general consensus that EI may be multifaceted and could be studied from different perspectives (Austin, Saklofske, & Egan, 2005; Stough, Saklofske, & Parker, 2009; Zeidner, Roberts, & Matthews, 2008).

Two conceptually different approaches dominate the current study of EI: the trait and the ability approach (Petrides & Furnham, 2001). The trait approach conceives EI as dispositional tendencies, such as personality traits or self-efficacy beliefs (see Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, Chap. 3, this volume). This approach is often indicated in the literature as also including "mixed" models, although such models are conceptually distinct from conceptions of EI as personality because they consider EI as a mixture of traits, competences, and abilities (e.g., Bar-On, 2006; Goleman, 1998). Both the trait approach and the "mixed" models share the same measurement methods of EI, namely, self-report questionnaires. In contrast, the ability approach conceptualizes EI as a cognitive ability based on the processing of emotion information and assesses it with performance tests. The current chapter deals with the latter approach, where we first outline Mayer and Salovey's (1997) foundational four-branch ability EI model, then describe commonly used and new measures of EI abilities, critically review evidence of EI's predictive validity, and finally discuss outstanding challenges, suggesting new directions for the measurement and conceptualization of EI as an ability.

Although not the focus of the present contribution, it should be noted that some attempts to integrate both ability and trait EI perspectives exist in the literature, including the multi-level developmental investment model (Zeidner, Matthews, Roberts, & MacCann, 2003) and the tripartite model (Mikolajczak, 2009). For example, the

tripartite model suggests three levels of EI: (1) knowledge about emotions, (2) ability to apply this knowledge in real-world situations, and (3) traits reflecting the propensity to behave in a certain way in emotional situations (typical behavior). Research and applications on this tripartite model are currently underway (e.g., Laborde, Mosley, Ackermann, Mrsic, & Dosseville, Chap. 11, this volume; Maillefer, Udayar, Fiori, [submitted](#)). More theory and research is needed to elucidate how the different EI approaches are related with each other. 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 (Ciarrochi, Chan, & Caputi, 2000; Mayer, Salovey, & Caruso, 2008; Petrides, Perez-Gonzalez, & Furnham, 2007).

The Four-Branch Ability EI Model

The main characteristic of the ability approach is that EI is conceived as a form of intelligence. It specifies that cognitive processing is implicated in emotions, is related to general intelligence, and therefore ought to be assessed through performance measures that require respondents to perform discrete tasks and solve specific problems (Freeland, Terry, & Rodgers, 2008; Mayer, Caruso, & Salovey, 2016; Mayer & Salovey, 1997). The mainstream model of EI as an ability is the four-branch model introduced by Mayer and Salovey (1997), which has received wide acknowledgment and use and has been foundational in the development of other EI models and measures. The four-branch model identifies EI as being comprised of a number of mental abilities that allow for the appraisal, expression, and regulation of emotion, as well the integration of these emotion processes with cognitive processes used to promote growth and achievement (Salovey & Grewal, 2005; Salovey & Mayer, 1990). The model is comprised of four hierarchically linked ability areas, or branches: perceiving emotions, facilitating thought using emotions, understanding emotions, and managing emotions (see Fig. 2.1).

Perceiving emotions (Branch 1) refers to the ability to identify emotions accurately through the attendance, detection, and deciphering of emotional signals in faces, pictures, or voices (Papadogiannis, Logan, & Sitarenios, 2009). This ability involves identifying emotions in one's own physical and psychological states, as well as an awareness of, and sensitivity to, the emotions of others (Mayer, Caruso, & Salovey, 1999; Papadogiannis et al., 2009).

Facilitating thought using emotions (Branch 2) involves the integration of emotions to facilitate thought. This occurs through the analysis of, attendance to, or reflection on emotional information, which in turn assists higher-order cognitive activities such as reasoning, problem-solving, decision-making, and consideration of the perspectives of others (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2002; Papadogiannis et al., 2009). Individuals with a strong ability to use emotions would be able to select and prioritize cognitive activities that are most conducive to their current mood state, as well as change their mood to fit the given situation in a way that would foster better contextual adaptation.

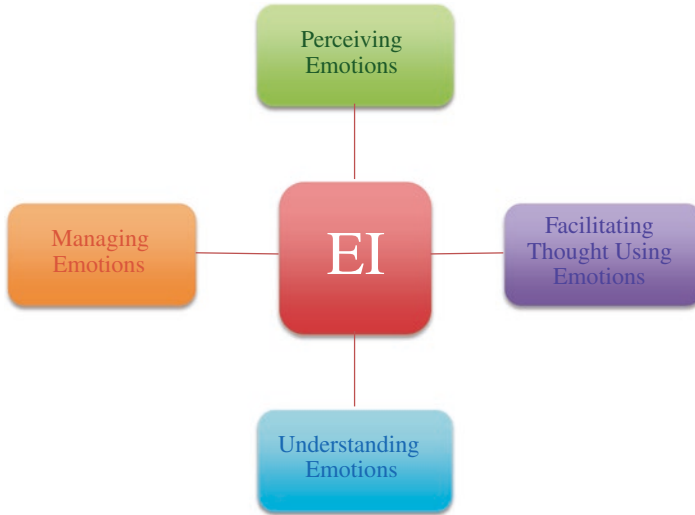


Fig. 2.1 The Mayer and Salovey (1997) four-branch model of emotional intelligence (EI) abilities

Understanding emotions (Branch 3) comprises the ability to comprehend the connections between different emotions and how emotions change over time and situations (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. Individuals stronger in this domain understand the complex and transitional relationships between emotions and can recognize emotional cues learned from previous experiences, thus allowing them to predict expressions in others in the future (Papadogiannis et al., 2009). For example, an understanding that a colleague is getting frustrated, through subtle changes in tone or expression, can improve individuals' communication in relationships and their personal and professional performances.

Finally, managing emotions (Branch 4) refers to the ability to regulate one's own and others' emotions successfully. Such ability would entail the capacity to maintain, shift, and cater emotional responses, either positive or negative, to a given situation (Rivers et al., 2007). This could be reflected in the maintenance of a positive mood in a challenging situation or curbing elation at a time in which an important decision must be made. Recovering quickly from being angry or generating motivation or encouragement for a friend prior to an important activity are illustrations of high-level emotion management (Papadogiannis et al., 2009).

The four EI branches are theorized to be hierarchically organized, with the last two abilities (understanding and management), which involve higher-order (strategic) cognitive processes, building on the first two abilities (perception and facilitation), which involve rapid (experiential) processing of emotion information (Mayer & Salovey, 1997; Salovey & Grewal, 2005). It should be noted that the proposed hierarchical structure of the model, as well as its four distinctive branches,

have been contradicted. First, developmental evidence suggests that abilities in different EI domains (e.g., perceiving, managing) are acquired in parallel rather than sequentially, through a complex learning process involving a wide range of biological and environmental influences (Zeidner et al., 2003). Though this conceptualization supports the notion that lower-level competencies aid in the development of more sophisticated skills, it also identifies ways in which the four EI branches are sometimes developed simultaneously, with lower-level abilities of perceiving, facilitating, understanding, and managing emotions at the same time leading to their later improvement.

The four-branch model has also been challenged through factor analysis in several cases, which did not support a hierarchical model with one underlying global EI factor (Fiori & Antonakis, 2011; Rossen, Kranzler, & Algina, 2008). Moreover, facilitating thought using emotions (Branch 2) did not emerge as a separate factor and was found to be empirically redundant with the other branches (Fan, Jackson, Yang, Tang, & Zhang, 2010; Fiori et al., 2014; Fiori & Antonakis, 2011; Gignac, 2005; Palmer, Gignac, Manocha, & Stough, 2005), leading scholars to adopt a revised three-branch model of ability EI, comprised of emotion recognition, emotion understanding, and emotion management (Joseph & Newman, 2010; MacCann, Joseph, Newman, & Roberts, 2014). Nevertheless, the four branches remain the foundation for current ability EI models, and their description aids in the *theoretical* understanding of the content domains covered by ability-based perspectives on EI (Mayer et al., 2016).

Measurement of EI Abilities

How ability EI is measured is critically important to how the results are interpreted. The fact that ability EI is measured by maximum-performance tests, as is appropriate for a form of intelligence, instead of self-report questionnaires, as is the case for trait EI (see Petrides et al., Chap. 3, this volume) can, in itself, lead to different results (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). 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 abilities, there are those who do not. There are, of course, others who over- or underestimate their intelligence unintentionally or for social desirability purposes, resulting in different scores depending on the format of measurement. Thus, it would be challenging to determine whether the results are attributable to the construct itself or to the assessment methods that are being used (MacCann & Roberts, 2008).

Though this 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, 2007; Roberts, Zeidner, & Matthews, 2007), problems with performance measures of EI that may alter the response outcome also exist. For instance, typical ability EI items require individuals

to demonstrate their “ability” to perceive, use, understand, and manage emotions by responding to a variety of hypothetical scenarios and visual stimuli, thus deeming the incorrect/correct response format as a method of scoring. Although this may correlate with real-life outcomes, it may not be an accurate representation of EI in real-life social interactions (Vesely, 2011; Vesely-Maillefer, 2015).

With these considerations in mind, we provide below a short description of the most commonly used as well as some newly developed tests to measure EI abilities.

The Mayer-Salovey-Caruso Emotional Intelligence Test

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer et al., 2002; Mayer, Salovey, Caruso, & Sitarenios, 2003) is the corresponding measure of the dominant-to-date four-branch theoretical model of ability EI (Mayer & Salovey, 1997). This is a performance-based measure that provides a comprehensive coverage of ability EI by assessing how people perform emotion tasks and solve emotional problems. It assesses the four EI branches with 141 items distributed across eight tasks (two tasks per branch). Perceiving emotions (Branch 1) is assessed with two emotion perception tasks: (1) the faces task involves identifying emotions conveyed through expressions in photographs of people’s faces; and (2) the pictures task involves identifying emotions in pictures of landscapes and abstract art. For both tasks, respondents are asked to rate on a 5-point scale the degree to which five different emotions are expressed in each stimulus. Facilitating thought (Branch 2) is assessed with two tasks: (1) the facilitation task involves evaluating how different moods may facilitate specific cognitive activities; and (2) the sensations task involves comparing emotions to other sensations, such as color, light, and temperature. For both tasks, respondents are asked to indicate which of the different emotions best match the target activity/sensation. Understanding emotions (Branch 3) is assessed with two multiple-choice tests: (1) the changes test involves questions about how emotions connect to certain situations and how emotions may change and develop over time; and (2) the blends test involves questions about how different emotions combine and interact to form new emotions. For both tests, respondents are asked to choose the most appropriate of five possible response options. Managing emotions (Branch 4) is assessed with two situational judgment tests (SJTs) using a series of vignettes depicting real-life social and emotional situations: (1) the emotion management test involves judgments about strategies for regulating the protagonist’s own emotions in each situation; and (2) the emotional relations test involves judgments about strategies for managing emotions within the protagonist’s social relationships. For both tests, respondents are asked to rate the level of effectiveness of several different strategies, ranging from 1 = very ineffective to 5 = very effective.

The MSCEIT assessment yields a total EI score, four-branch scores, and two area scores for experiential EI (Branches 1 and 2 combined) and strategic EI

(Branches 3 and 4 combined). Consistent with the view of EI as a cognitive ability, the scoring of item responses follows the correct/incorrect format of an ability-based IQ test while also requiring the individual to be attuned to social norms (Salovey & Grewal, 2005). The correctness of the MSCEIT responses can be determined in one of two ways: (a) based on congruence with the answers of emotion experts (expert scoring) or (b) based on the proportion of the sample that endorsed the same answer (general consensus scoring) (Mayer et al., 2003; Papadogiannis et al., 2009; Salovey & Grewal, 2005). Mayer et al. (2003) reported high agreement between the two scoring methods in terms of correct answers ($r = 0.91$) and test scores ($r = 0.98$). The test internal consistency reliability (split half) is $r = 0.91$ – 0.93 for the total EI and $r = 0.76$ – 0.91 for the four-branch scores, with expert scoring producing slightly higher reliability estimates (Mayer et al., 2003).

The MSCEIT has been the only test available to measure EI as an ability for a long time, and much of the existing validity evidence on ability EI, which we review in the next section, is based on the MSCEIT, introducing the risk of mono-method bias in research. Although there are other standardized tests that can be used to measure specific EI abilities (described below), the MSCEIT remains the only omnibus test to measure all four branches of the ability EI model in one standardized assessment. Another attractive feature of the MSCEIT is the availability of a matching youth research version (MSCEIT-YRV; Mayer, Salovey, & Caruso, 2005; Rivers et al., 2012), which assesses the same four EI branches using age-appropriate items for children and adolescents (ages 10–17). However, a major barrier to research uses of the MSCEIT and its derivatives is that these tests are sold commercially and scored off-site by the publisher, Multi-Health Systems Inc. Furthermore, the MSCEIT has several well-documented psychometric limitations (Fiori et al., 2014; Fiori & Antonakis, 2011; Maul, 2012; Rossen et al., 2008), which have prompted researchers to develop alternative instruments, to generalize findings across assessments, and to create non-commercial alternatives for research.

Tests of Emotion Understanding and Management

Recently, there has been an important advancement in ability EI measurement: the introduction of a second generation of ability EI tests, notably the Situational Test of Emotional Understanding (STEU) and the Situational Test of Emotion Management (STEM) introduced by MacCann and Roberts (2008). Both the STEU and the STEM follow the SJT format similar to that used for the managing emotions branch of the MSCEIT, where respondents are presented with short vignettes depicting real-life social and emotional situations (42 on the STEU and 44 on the STEM) and asked to select, among a list of five, which emotion best describes how the protagonist would feel in each situation (STEU) or which course of action would be most effective in managing emotions in each situation (STEM). Correct answers on the STEU are scored according to Roseman's (2001) appraisal theory (theory-based scoring), and correct answers on the STEM are scored according to the judgments

provided by emotion experts (expert scoring). The reliability of the two tests is reported to be between $\alpha = 0.71$ and 0.72 for STEU and between $\alpha = 0.68$ and 0.85 for STEM (Libbrecht & Lievens, 2012; MacCann & Roberts, 2008). Brief forms of both tests (18–19 items) have also been developed for research contexts where comprehensive assessment of EI is not required (Allen et al., 2015). There is also an 11-item youth version of the STEM (STEM-Y; MacCann, Wang, Matthews, & Roberts, 2010) adapted for young adolescents. The STEU and STEM items are available free of charge in the American Psychological Association PsycTESTS database (see also <https://doi.org/10.1037/a0012746.supp>). These tests look promising, although they have been introduced recently and more research is needed to ascertain their construct and predictive validity (but see Burrus et al., 2012; Libbrecht & Lievens, 2012; Libbrecht, Lievens, Carette, & Côté, 2014).

The text-based format of the SJT items on the STEU, STEM, and MSCEIT raises concerns about their ecological validity, as real-life social encounters require judgments of verbal as well as nonverbal cues. To address this concern, MacCann, Lievens, Libbrecht, and Roberts (2016) recently developed a multimedia test of emotion management, the 28-item multimedia emotion management assessment (MEMA), by transforming the original text-based scenarios and response options from the STEM into a video format. MacCann et al.'s (2016) comparisons of the MEMA with the text-based items from the MSCEIT managing emotions branch produced equivalent evidence of construct and predictive validity for the two tests.

Tests of Emotion Perception

There are several long-existing standardized measures of perceptual accuracy in recognizing emotions, many of which were introduced even before the construct of EI. Therefore, these were not presented as EI tests but do capture the perceiving emotions branch of EI and could be considered as viable alternatives to the MSCEIT. Among the most frequently used of these tests are the Diagnostic Analysis of Nonverbal Accuracy (DANVA; Nowicki & Duke 1994), the Profile of Nonverbal Sensitivity (PONS; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979), and the Japanese and Caucasian Brief Affect Recognition Test (JACBART; Matsumoto et al., 2000). Like the MSCEIT faces task, these tests involve viewing a series of stimuli portraying another person's emotion, and the respondent's task is to correctly identify the emotion expressed. However, unlike the rating-scale format of the MSCEIT faces items, these other tests use a multiple-choice format, where respondents must choose one emotion, from a list of several, that best matches the stimulus. This difference in response format could be one possible reason why performance on the MSCEIT perceiving branch shows weak convergence with these other emotion recognition tests (MacCann et al., 2016).

Different emotion recognition tests use different types of stimuli and modalities (e.g., photos of faces, audio recordings) and cover different numbers of target emotions. For example, the DANVA uses 24 photos of male and female facial

expressions and 24 audio recordings of male and female vocal expressions of the same neutral sentence (“I am going out of the room now but I’ll be back later”), representing 1 of 4 emotions (happiness, sadness, anger, and fear) in 2 intensities, either weak or strong. The PONS is presented as a test assessing interpersonal sensitivity, or the accuracy in judging other people’s nonverbal cues and affective states. It includes 20 short audio and video segments of a woman for a total length of 47 minutes. The task is to identify which of two emotion situations best describes the woman’s expression. The JACBART uses 56 pictures of Japanese and Caucasian faces expressing 1 of 5 emotions (fear, happiness, sadness, anger, surprise, contempt, and disgust). The interesting feature of this test, in comparison to others, is that it employs a very brief presentation time (200 ms). Each expressive picture is preceded and followed by the neutral version of the same person expressing the emotion in the target picture, so as to reduce post effects of the pictures and get a more spontaneous evaluation of the perceived emotion.

Both the MSCEIT perceiving branch and the earlier emotion recognition tests have been critiqued for their focus on a single modality (i.e., still photos vs. audio recordings), as well as for their restricted range of target emotions (i.e., few basic emotions, only one of them positive), which limits their ecological validity and precludes assessing the ability to differentiate between more nuanced emotion states (Schlegel, Fontaine, & Scherer, 2017; Schlegel, Grandjean, & Scherer, 2014). The new wave of emotion recognition tests developed at the Swiss Center for Affective Sciences – the Multimodal Emotion Recognition Test (MERT; Bänziger, Grandjean, & Scherer, 2009) and the Geneva Emotion Recognition Test (GERT; Schlegel et al., 2014) – aim to rectify both problems by employing more ecologically valid stimuli, involving dynamic multimodal (vocal *plus* visual) portrayals of 10 (MERT) to 14 (GERT) different emotions, half of them positive. For example, the GERT consists of 83 videos (1–3 s long) of professional male and female actors expressing 14 emotions (joy, amusement, pride, pleasure, relief, interest, anger, fear, despair, irritation, anxiety, sadness, disgust, and surprise) through facial expressions, nonverbal gestural/postural behavior, and audible pseudo-linguistic phrases that resemble the tone of voice of the spoken language. A short version (GERT-S) is also available with 42 items only (Schlegel & Scherer, 2015). The reliability is 0.74 for the long version. The emerging evidence for the construct and predictive validity of the GERT looks promising (Schlegel et al., 2017).

Predictive Validity of Ability EI

Among the most researched and debated questions in the ability EI literature is whether ability EI can predict meaningful variance in life outcomes – does ability EI matter? (Antonakis, Ashkanasy, & Dasborough, 2009; Brackett, Rivers, & Salovey, 2011; Mayer, Salovey, & Caruso, 2008). Several studies have shown that ability EI predicts health-related outcomes, including higher satisfaction with life, lower depression, and fewer health issues (Fernández-Berrocal & Extremera, 2016;

Martins, Ramalho, & Morin, 2010). Furthermore, high EI individuals tend to be perceived by others more positively because of their greater social-emotional skills (Fiori, 2015; Lopes, Cote, & Salovey, 2006) and thus enjoy better interpersonal functioning in the family (Brackett et al., 2005), at work (Côte & Miners, 2006), and in social relationships (Brackett et al., 2006). Ability EI has also been positively implicated in workplace performance and leadership (Côte, Lopes, Salovey, & Miners, 2010; O'Boyle, Humphrey, Pollack, Hawver, & Story, 2011).

Evidence for ability EI predicting academic success is mixed in post-secondary settings (see Parker, Taylor, Keefer, & Summerfeldt, Chap. 16, this volume) but more consistent for secondary school outcomes, where ability EI measures have been associated with fewer teacher-rated behavioral and learning problems and higher academic grades (Ivcevic & Brackett, 2014; Rivers et al., 2012). There is also compelling evidence from over 200 controlled studies of school-based social and emotional learning (SEL) programs, showing that well-executed SEL programs reduce instances of behavioral and emotional problems and produce improvements in students' academic engagement and grades (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; see also Elias, Nayman, & Duffell, Chap. 12, this volume). Hoffmann, Ivcevic, and Brackett (Chap. 7, this volume) describe one notable example of such evidence-based SEL program, the RULER approach, which is directly grounded in the four-branch ability EI model.

Although these results are certainly encouraging regarding the importance of ability EI as a predictor of personal, social, and performance outcomes, there are several important caveats to this conclusion. First, ability EI measures may capture predominantly the knowledge aspects of EI, which can be distinct from the routine application of that knowledge in real-life social-emotional interaction. This disconnect between emotional knowledge and application of knowledge is also supported by the tripartite model of EI mentioned above (Mikolajczak, 2009), which separates the ability-based knowledge from trait-based applications within its theory. For example, it posits the possibility that a person with strong cognitive knowledge and verbal ability can describe which emotional expression would be useful in a given situation, but may not be able to select or even display the corresponding emotion in a particular social encounter. Indeed, many other factors, apart from intelligence, contribute to people's actual behavior, including personality, motives, beliefs, and situational influences.

This leads to the second caveat: whether ability EI is distinct enough from other established constructs, such as personality and IQ, to predict incremental variance in outcomes beyond these well-known variables. Although the overlap of EI measures with known constructs is more evident for trait EI measures (Joseph, Jin, Newman, & O'Boyle, 2015), some studies have shown that a substantial amount of variance in ability EI tests, in particular the MSCEIT, was predicted by intelligence, but also by personality traits, especially the trait of agreeableness (Fiori & Antonakis, 2011). These results suggest that ability EI, as measured with the MSCEIT, pertains not only to the sphere of emotional abilities, as it was originally envisioned, but depends also on one's personality characteristics, which conflicts with the idea that ability EI should be conceived (and measured) solely as a form of intelligence.

Given these overlaps, the contribution of ability EI lowers once personality and IQ are accounted for. For example, the meta-analysis by Joseph and Newman (2010) showed that ability EI provided significant but rather limited incremental validity in predicting job performance over personality and IQ.

Of course, one may argue that even a small portion of incremental variance that is not accounted for by known constructs is worth the effort. Further and indeed, a more constructive reflection on the role of ability EI in predicting various outcomes refers to understanding why its contributions may have been limited so far. The outcomes predicted by ability EI should be emotion-specific, given that it is deemed to be a form of intelligence that pertains to the emotional sphere. There is no strong rationale for expecting ability EI to predict generic work outcomes such as job performance; for this type of outcome, we already know that IQ and personality account for the most variance. Instead, work-related outcomes that involve the regulation of emotions, such as emotional labor, would be more appropriate. This idea is corroborated by the meta-analytic evidence showing stronger incremental predictive validity of ability EI for jobs high in emotional labor, such as customer service positions (Joseph & Newman, 2010; Newman, Joseph, & MacCann, 2010).

Another reason why the incremental validity of ability EI measures appears to be rather small may be related to the limits of current EI measures. For example, the MSCEIT has shown to be best suited to discriminate individuals at the low end of the EI ability distribution (Fiori et al., 2014). For the other individuals (medium and high in EI), variation in the MSCEIT scores does not seem to reflect true variation in EI ability. Given that most of the evidence on ability EI to date is based on the MSCEIT, it is likely that some incremental validity of ability EI was “lost” due to the limitations of the test utilized to measure it.

Another caveat concerns making inferences about predictive validity of ability EI from the outcomes of EI and SEL programs. Here, the issue is in part complicated by the fact that terms such as “ability” and “competence” are often used interchangeably, but in fact reflect different characteristics, the latter being a trait-like solidification of the former through practice and experience. Many EI programs are in fact meant to build emotional competence, going beyond the mere acquisition of emotional knowledge and working toward the application of that knowledge across different contexts. As such, other processes and factors, apart from direct teaching and learning of EI abilities, likely contribute to positive program outcomes. For example, the most effective school-based SEL programs are those that also modify school and relational environments in ways that would model, reinforce, and provide opportunities for students to practice the newly acquired EI skills in everyday situations (see also Elias et al., Chap. 12, this volume; Humphrey, Chap. 8, this volume). Thus, it would be inappropriate to attribute the outcomes of such programs *solely* to increases in students’ EI abilities, without acknowledging the supportive social and contextual influences.

It is also important to better understand which processes mediate the role of ability EI in improving individuals’ emotional functioning. Social cognitive theories of self-efficacy (Bandura, 1997) and self-concept (Marsh & Craven, 2006) can inform which types of processes might be involved in linking ability to behavioral change.

Specifically, successful acquisition and repeated practice of EI skills can build individuals' sense of confidence in using those skills (i.e., higher perceived EI self-efficacy), which would increase the likelihood of drawing upon those skills in future situations, in turn providing further opportunities to hone the skills and reinforce the sense of self-competence (Keefer, 2015). Research on self-efficacy beliefs in one's ability to regulate emotions supports this view (Alessandri, Vecchione, & Caprara, 2015).

Mayer et al. (2016) cogently summarized the ambivalent nature of predictive validity evidence for ability EI: "the prediction from intelligence to individual instances of "smart" behavior is fraught with complications and weak in any single instance. At the same time, more emotionally intelligent people have outcomes that differ in important ways from those who are less emotionally intelligent" (p. 291). We concur with this conclusion but would treat it as tentative, given that there are several unresolved issues with the way ability EI has been measured and conceptualized, as discussed below. This opens the possibility that EI's predictive validity would improve once these measurement and theoretical issues have been clarified.

Measurement and Conceptual Issues

Scoring of Correct Responses

One of the greatest challenges of operationalizing EI as an ability has been (and still is) how to score a correct answer on an ability EI test. Indeed, in contrast to personality questionnaires in which answers depend on the unrestricted choice of the respondent and any answer is a valid one, ability test responses are deemed correct or wrong based on an external criterion of correctness. Among the most problematic aspects is the identification of such criterion; it is difficult to find *the one best way* across individuals who may differ with respect to how they feel and manage emotions effectively (Fiori et al., 2014). After all, the very essence of being intelligent implies finding the best solution to contextual adaptation given the resources one possesses. For example, one may be aware that, in principle, a good way to deal with a relational conflict is to talk with the other person to clarify the sources of conflict and/or misunderstanding. However, if one knows they and/or their partner are not good at managing interpersonal relationships, one may choose to avoid confrontation as a more effective strategy in the moment, given the personal characteristics of the individuals involved (Fiori et al., 2014).

This example evokes another issue that has not been addressed in the literature on ability EI, namely, the potential difference between what response would be more "intelligent" personally versus socially. One may argue that the solution should fill both needs; however, these may be in contradiction. For instance, suppression of one's own feelings may help to avoid an interpersonal conflict, an action seen as socially adaptive; however, this same strategy maybe personally unhealthy if the person does not manage their suppressed emotion in other constructive ways.

In this case, a more socially unacceptable response that releases emotion may have been more “emotionally intelligent” as it relates to the self but less so as it relates to others. The problematic part is that current measurement tools do not take these nuances into account. This relates also to the lack of distinction in the literature on emotion skills related to the “self” versus “others,” a criticism discussed below.

In addition, “correctness” of an emotional reaction may depend on the time frame within which one intends to pursue a goal that has emotional implications. For example, if a person is focused on the short-term goal of getting one’s way after being treated unfairly by his or her supervisor, the most “effective” way to manage the situation would be to defend one’s position in front of the supervisor regardless of possible ramifications. In contrast, if one is aiming at a more long-term goal, such as to preserve a good relationship with the boss, the person may accept what is perceived as an unfair treatment and try to “let it go” (Fiori et al., 2014).

Scholars who have introduced ability EI measures have attempted to address these difficulties by implementing one of these three strategies to find a correct answer: (a) judge whether an answer is correct according to the extent to which it overlaps with the answer provided by the majority of respondents, also called the *consensus scoring*; (b) identify correctness according to the choice provided by a pool of emotion experts, or *expert scoring*; and (c) identify whether an answer is correct according to the principles of emotion theories, or *theoretical scoring*. The consensus scoring was introduced by Mayer et al. (1999) as a scoring option for the MSCEIT, based on the idea that emotions are genetically determined and shared by all human beings and that, for this reason, the answer chosen by the majority of people can be taken as the correct way to experience emotions. Unfortunately, this logic appears profoundly faulty once one realizes that answers chosen by the majority of people are by definition easy to endorse and that tests based on this logic are not challenging enough for individuals with average or above average EI (for a thorough explanation of this measurement issue, see Fiori et al., 2014).

Furthermore, what the majority of people say about emotions may simply reflect lay theories, which, although shared by most, can still be incorrect. The ability to spot a fake smile is a good example of this effect. This task is challenging for all but a restricted group of emotion experts (Maul, 2012). In this case, the “correct” answer should be modeled on the few that can spot fake emotions, not on the modal answer in the general population. In fact, the emotionally intelligent “prototype” should be among the very few that can spot fake emotions, rather than among the vast majority of people that get them wrong. Thus, from a conceptual point of view, it would make better sense to score test takers’ responses with respect to a group of emotion experts (high EI individuals), as long as items reflect differences between typical individuals and those that are higher than the norm (Fiori et al., 2014). Items for which the opinion of experts is very close to that of common people should be discarded in testing EI abilities, because they would not be difficult enough to discriminate among individuals with different levels of EI.

Finally, scoring grounded in emotion theories offers a valuable alternative, as it allows setting item difficulties and response options in correspondence with theory-informed emotion processes (Schlegel, 2016). Some of the recently developed

ability EI tests have utilized this approach. For example, response options on the STEM-B (Allen et al., 2015) and MEMA (MacCann et al., 2016) map onto the various emotion regulation strategies outlined in Gross' (1998) process model of emotion regulation. Based on this theory, certain strategies (e.g., positive reappraisal, direct modification) would be more adaptive than others (e.g., emotion suppression, avoidance), and the correct responses on the ability EI items can be set accordingly. However, this too may appear to be a "subjective" criterion because of the differences among theories regarding what is deemed the adaptive way to experience, label, and regulate emotions. For example, suppression is regarded as a deleterious strategy to manage emotions because of its negative long-term effects (Gross, 1998). However, evidence suggests (Bonanno, Papa, Lalande, Westphal, & Coifman, 2004; Matsumoto et al., 2008) that the damaging effect of suppressing emotions may depend on how this strategy fits with the social and cultural contexts, as also discussed earlier in the example of the relational conflict. Moreover, there are systematic differences across cultures in how emotions are to be expressed, understood, and regulated "intelligently" (see Huynh, Oakes, & Grossman, Chap. 5, this volume), which poses additional challenges for developing an unbiased scoring system for ability EI tests.

Self- vs. Other-Related EI Abilities

Another issue that has not received much attention in the literature and that might explain why ability EI contributions in predicting outcomes are limited refers to the fact that ability EI theorization, in particular Mayer and Salovey's (1997) four-branch model, blurs the distinction between emotional abilities that refer to the *self* with those that refer to *others* (e.g., perceiving emotions in oneself vs. in others, understanding what one is feeling vs. someone else is feeling, etc.), as if using the abilities for perceiving/understanding/managing emotions in oneself would automatically entail using these abilities successfully with others. However, being good at understanding one's own emotional reactions does not automatically entail being able to understand others' emotional reactions (and vice versa). There is some intuitive evidence: some professionals (e.g., emotion experts, psychologists) may be very good at understanding their patients' emotional reactions, but not as good at understanding their own emotional reactions. Further, scientific evidence also exists: knowledge about the self seems to be processed in a distinctive way compared to social knowledge. For example, brain imaging studies show that taking the self-perspective or the perspective of someone else activates partially different neural mechanisms and brain regions (David et al., 2006; Vogeley et al., 2001).

The most important implication of considering the two sets of abilities (e.g., employed for oneself or with respect to others) as distinct rather than equivalent is that each of them might predict different outcomes. Recent evidence comes from a program evaluation study of an EI training program for teachers investigating the mechanisms by which EI skills are learned (described in Vesely-Maillefer &

Saklofske, Chap. 14, this volume). Preliminary results showed differential perceived outcomes in self- versus other-related EI skills, dependent on which ones were taught and practiced. Specifically, practice of self-relevant EI skills was the primary focus of the program, and these were perceived to have increased by the program's end more than the other-related EI skills (Vesely-Maillefer, 2015).

It is worth noting that some recently introduced measures of EI make the explicit distinction between the self- and other-oriented domains of abilities. For instance, the Profile of Emotional Competence (PEC; Brasseur, Grégoire, Bourdu, & Mikolajczak, 2013) is a trait EI questionnaire that distinguishes between intrapersonal and interpersonal EI competences, and the Genos emotional intelligence test (Gignac, 2008) measures awareness and management of emotions in both self and others separately. Additionally, a new ability EI test currently under development at the University of Geneva, the Geneva Emotional Competence Test (Mortillaro & Schlegel), distinguishes between emotion regulation in oneself (emotion regulation) and in others (emotion management). The adoption of these more precise operationalizations of self- and other-related EI abilities would allow collecting "cleaner" validity data for the ability EI construct.

Conscious vs. Automatic Processes

Among the most compelling theoretical challenges EI researchers need to address is to understand the extent to which ability EI depends on conscious versus automatic processes (Fiori, 2009). Most ability EI research, if not all, has dealt with the investigation of how individuals thoughtfully reason about their own and others' emotional experience by consciously feeling, understanding, regulating, and recognizing emotions. However, a large portion of emotional behavior is, in fact, not conscious (Feldman Barrett, Niedenthal, & Winkielman, 2005). For example, individuals may process emotional signals, such as nonverbal emotional behavior, without having any hint of conscious perception (Tamietto & de Gelder, 2010). Applied to the domain of ability EI, this implies that individuals may be able to use emotions intelligently even without being aware of how they do it and/or without even realizing that they are doing it. Research on cognitive biases in emotional disorders supports this idea: systematic errors in the automatic processing of emotion information have been causally implicated in vulnerability for mood and anxiety disorders (Mathews & MacLeod, 2005).

EI scholars need to acknowledge the automaticity component of ability EI, first, because it is theoretically relevant and second, because it might explain additional variance in emotionally intelligent behavior due to subconscious or unconscious processes that have been ignored to date. Some contributions have provided conceptual models (Fiori, 2009) and raised theoretical issues (Ybarra, Kross, & Sanchez-Burks, 2014) that would help to move forward in this direction. Evidence-based research is the next step and would require scholars to employ experimental para-

designs in which the level of emotional consciousness is manipulated in order to observe its effects on emotionally intelligent behavior.

New Developments and Future Directions

The domain of research on ability EI is in its early developmental stage, and there is still much to explore, both on the theoretical and the measurement side. The seminal four-branch model introduced by Mayer and Salovey (1997) needs to be further developed and refined on the basis of the most recent research findings. As mentioned above, the model of ability EI as composed of four hierarchically related branches underlying a latent global EI factor does not seem to be supported, at least in its original formulation (e.g., Fiori & Antonakis, 2011; Rossen et al., 2008). On the measurement side, it seems as if progress has been made in terms of introducing new tests to measure specific EI abilities. A further step is to clarify what exactly scores on these tests are measuring and what mechanisms account for test performance. For instance, in the past the possibility was raised that individuals high in EI might be overly sensitive to emotions felt by themselves and by others in a way that could in certain circumstances compromise their health (e.g., Ciarrochi et al., 2002) and social effectiveness (Antonakis et al., 2009). Recent empirical evidence (Fiori & Ortony, 2016) showed that indeed high EI individuals were more strongly affected by incidental anger in forming impressions of an ambiguous target (study 1) and that they amplified the importance of emotion information, which affected their social perception (study 2). This characteristic associated with being high in EI was called “hypersensitivity,” and it was deemed to have either positive or negative effects depending on the context (Fiori & Ortony, 2016).

Further investigation should also clarify which aspects of ability EI may be missing in current measurement and theorization. Ability EI tests, including the second generation, show moderate correlations with measures of intelligence, a finding that supports the conceptualization of EI as a form of intelligence. Interestingly, the component of intelligence most strongly correlated with measures of EI abilities – particularly the strategic branches of understanding and managing – is crystallized intelligence, or g_c (Farrelly & Austin, 2007; MacCann, 2010; Mayer, Roberts, & Barsade, 2008; Roberts et al., 2006, 2008), which suggests that current tests represent especially the acquired knowledge about emotions people possess. Indeed, items of the STEU and the STEM (as well as most items of the MSCEIT) require respondents to identify the best strategy to cope with emotionally involving situations described in a short vignette or to understand the emotion one would feel in a hypothetical scenario. Individuals may correctly answer such items relying on what they know about emotions, leaving open the question of whether they would be able to apply that knowledge in novel situations. For instance, individuals with Asperger’s syndrome undertaking ability EI training improved their EI scores while still lacking fundamental interpersonal skills (Montgomery, McCrimmon, Schwean, & Saklofske, 2010). All in all, it appears that the STEU and the STEM measure per-

formance in hypothetical situations, rather than actual performance, the former being more dependent on the declarative knowledge individuals possess about emotions (Fiori, 2009; Fiori & Antonakis, 2012). Tests employed to measure emotion recognition ability (e.g., JACBART) are not based on hypothetical scenarios but on pictures or videos of individuals showing emotions. Although these tests require the use of perceptual skills – differently from the tests of strategic EI abilities – they still show a significant association with g_c although to a lesser extent (Roberts et al., 2006). Indeed, individuals may rely on the knowledge they possess of how emotions are expressed to correctly identify emotions.

At the same time, ability EI measures show little associations with emotion-processing tasks that are more strongly related to the fluid component of intelligence, or g_f , such as inspection time and selective attention to emotional stimuli (Farrelly & Austin, 2007; Fiori & Antonakis, 2012). For example, Fiori and Antonakis (2012) examined predictors of performance on a selective attention task requiring participants to ignore distracting emotion information. Results showed that fluid intelligence and the personality trait of openness predicted faster correct answers on the attentional task. Interestingly, none of the ability EI test facets (as measured with the MSCEIT) predicted performance, suggesting that the MSCEIT taps into something different from emotion information processing. Austin (2010) examined the associations of the STEU and the STEM with inspection time on an emotion perception task and found no relations for the STEM. The STEU scores predicted inspection time only at intermediate and long stimulus durations, but not at very brief exposures requiring rapid processing of the stimuli, suggesting that the STEU captures conscious rather than preconscious emotion information processing. MacCann, Pearce, and Roberts (2011) looked at the associations of the strategic EI abilities (measured with the STEU and STEM), fluid and crystallized intelligence, and emotion recognition tasks based on processing of visual and auditory emotional stimuli. Their results revealed an ability EI factor distinct from g , but with some subcomponents more strongly related to g_f (particularly those involving visual perception of emotional stimuli) and others to g_c (those concerning strategic abilities and the auditory perception of emotional stimuli). This study suggested the presence of potentially distinct subcomponents of fluid and crystallized ability EI, although the authors did not investigate this possibility (MacCann et al., 2011).

The association between current ability EI tests and emotion-information processing tasks has not been systematically addressed in the literature and deserves further investigation. In fact, it is expected that high-EI individuals would have wider emotion knowledge but also stronger emotion-processing abilities in dealing with emotional stimuli, both accounting for how individuals perform in emotionally charged situations and each predicting distinct portions of emotionally intelligent behavior. The identification of a component of ability EI that is not (fully) captured by current tests is important because it would reveal an aspect of EI that is not measured (and therefore omitted) in current research. Yet, such a component may be relevant to predicting emotionally intelligent behavior. For example, Ortony, Revelle, and Zinbarg (2008), in making the case as to why ability EI would need a fluid, experiential component, cite the case of intelligent machines, which, on the

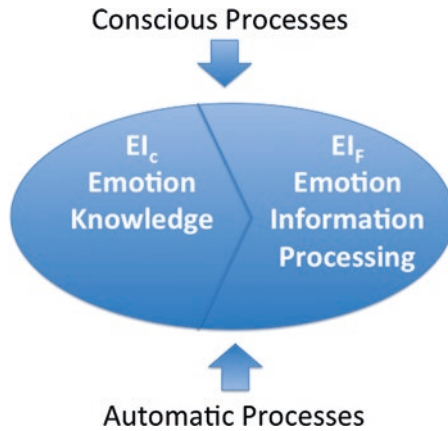


Fig. 2.2 Conceptualization of ability EI as composed of a fluid (EI_F) and crystallized (EI_C) component, both affected by conscious and automatic emotion processes

basis of algorithmic processes, would be able to perform well on the ability EI test even without being able to experience any emotion. This example highlights the importance of measuring factors associated with emotional experience and the processing of emotion information, beyond emotion knowledge, which would be better captured by bottom-up processes generated by the encoding and treatment of emotion information.

In sum, research suggests that within a broad conceptualization of ability EI as a unique construct, there might be two distinct components: one related to top-down, higher-order reasoning about emotions, depending more strongly on acquired and culture-bound knowledge about emotions, hereafter named the crystallized component of ability EI (EI_C , or emotion knowledge), and another based on bottom-up perceptual responses to emotion information, requiring fast processing and hereafter named the fluid component of ability EI (EI_F , or emotion information processing) (see Fig. 2.2).

An additional way to look at the relationship between the two components underlying ability EI is by considering what might account for such differences, namely, the type of processing (conscious vs. automatic) necessary for ability EI tests. The role automatic processes might play in EI has been approached only recently (Fiori, 2009), and it is progressively gaining recognition and interest especially in organizational research (Walter, Cole, & Humphrey, 2011; Ybarra et al., 2014). With respect to the relationship between a crystallized and a fluid component of ability EI, it is plausible that answers to current ability EI tests strongly rely on conscious reasoning about emotions, whereas performance on emotional tasks, such as inspection time and fast categorization of emotional stimuli, for example, relies more on automatic processing. This may be the case as individuals in the latter tasks provide answers without being fully aware of what drives their responses. Thus, current ability EI tests and emotion information processing tasks may be tapping into different ways of processing emotion information (conscious vs. automatic; see also Fiori, 2009). The extent to which current ability EI tests depend on controlled processes and are affected by cognitive load is still unaddressed (Ybarra et al., 2014).

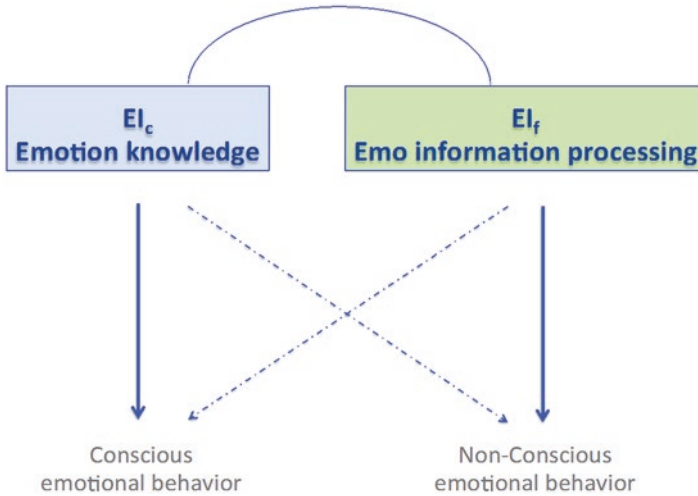


Fig. 2.3 Hypothesized effects of the fluid (EI_f) and crystallized (EI_c) ability EI components on emotional behavior

Given that no task is process pure (Jacoby, 1991), both controlled and automatic processes are likely to account for responses in current ability EI tests. However, such tests require great effort and deep reasoning about emotions and thus likely tap mostly into controlled processes.

The most important implication of the engagement of two types of processing in ability EI is that each of them may predict a different type of emotional performance. More specifically, ability EI tests that rely more on emotion knowledge or the crystallized component of EI may be more suited to predict effortful and consciously accessible emotional behavior, whereas tasks meant to “catch the mind in action” (Robinson & Neighbors, 2006), such as those based on emotion information processing, may account mostly for spontaneous and unintentional behavior. If this is the case, then current ability EI tests may predict to a greater extent consciously accessible performance and to a lower extent emotionally intelligent behaviors that depend on spontaneous/automatic processing (Fiori, 2009; Fiori & Antonakis, 2012). The hypothesized relationship is illustrated in Fig. 2.3.

The next generation of ability EI tests will hopefully incorporate more recent theoretical advancements related to additional components of EI – such as sub- or unconscious processes or the fluid, emotion-information processing component of EI. Some may ask how the perfect measure would look like. Knowing that EI is a complex construct, it seems unlikely that “one perfect” measure that would capture all the different components of EI is in the near future. It may be more realistic to aim for “several good” measures of EI, each of them capturing key aspects of this construct with satisfactory reliability and validity. Despite some noted theoretical and practical gaps in the current literature on ability EI, the construct of EI is still in its developmental stages. With increasing interest in EI’s potential for real-world

applications and its growing literature, this domain of research provides a challenging yet exciting opportunity for innovative researchers.

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Chapter 3

Emotional Intelligence as Personality: Measurement and Role of Trait Emotional Intelligence in Educational Contexts



**K. V. Petrides, Maria-Jose Sanchez-Ruiz, Alex B. Siegling,
Donald H. Saklofske, and Stella Mavroveli**

Abstract Trait emotional intelligence (trait EI or trait emotional self-efficacy) is formally defined as a constellation of emotional perceptions assessed through questionnaires and rating scales (Petrides et al. *Br J Psychol* 98:273–289, 2007). The construct describes our perceptions of our emotional world (e.g., how good we believe we are in terms of understanding, managing, and utilizing our own and other people’s emotions). Although it has been empirically demonstrated that these perceptions affect virtually every area of our life, the present chapter focuses exclusively on their role in education. We begin with a brief overview of trait EI theory and measures that have been salient in education research, with particular emphasis on scales developed for children and adolescents. Subsequently, we summarize the effects of trait EI on academic performance and related variables across primary, secondary, and tertiary education. The review of the evidence indicates that research-based applications of trait EI theory in educational settings can yield concrete and lasting advantages for both individuals and schools.

K. V. Petrides (✉)

London Psychometric Laboratory, University College London, London, UK
e-mail: k.petrides@ucl.ac.uk; <http://www.psychometriclab.com/>

M.-J. Sanchez-Ruiz

Lebanese American University, Beirut, Lebanon
e-mail: maria-jose.sanchez-ruiz@lau.edu.lb

A. B. Siegling

University College London, London, UK
e-mail: a.siegling@ucl.ac.uk

D. H. Saklofske

Department of Psychology, University of Western Ontario, London, ON, Canada
e-mail: dsaklofs@uwo.ca

S. Mavroveli

Imperial College London, London, UK
e-mail: s.mavroveli@imperial.ac.uk

Trait emotional intelligence (trait EI) describes our perceptions of our emotional world: what our emotional dispositions are and how good we believe we are in terms of perceiving, understanding, managing, and utilizing our own and other people's emotions. The roots of trait EI lie in the long-standing study of emotions within personality psychology (e.g., Revelle & Scherer, 2009). The construct, which has also been labeled as "trait emotional self-efficacy," is formally defined as a constellation of emotional perceptions assessed via questionnaires and rating scales (Petrides, Pita, & Kokkinaki, 2007).

In this chapter, we provide a summary of the role of trait EI in primary, secondary, and tertiary educational settings. Due to lack of space, we do not consider the related areas of career and vocational choice and guidance, wherein trait EI certainly has a role to play (for a review, see Chap. 13 by Di Fabio & Saklofske, this volume). For example, we note in passing that there are reliable differences in the trait EI profiles of students in different university departments (e.g., arts students score higher on the emotionality factor of trait EI than students in technical disciplines; Sanchez-Ruiz, Pérez-González, & Petrides, 2010) and that trait EI has been linked to career-related decision-making (Di Fabio & Saklofske, 2014) and career adaptability (Coetzee & Harry, 2014).

The chapter is divided into three major parts. The first part provides a brief overview of trait EI theory. The second part presents fairly detailed descriptions of the main trait EI measures used in child development and education-related research, while the third part examines the effects of the construct on school behavior and, especially, on academic achievement, followed by a brief note on trait EI interventions in educational contexts.

Trait EI Theory

Trait EI theory was introduced by Petrides (2001) and proposed, among several other fundamental ideas, the distinction between trait and ability EI, where the former mainly concerns emotional perceptions assessed via questionnaires and rating scales (Petrides et al., 2007) and the latter concerns emotion-related cognitive abilities that ought, in theory, to be amenable to IQ-type testing (Mayer & Salovey, 1997).

Unlike the construct of ability EI that strives to capture an aspect of human intelligence that is presumed to be universally adaptive, trait EI theory does not assume that there is one "correct" or "best" way to be; rather, certain trait EI profiles will be advantageous in some contexts, but not in others (Petrides, 2010). For example, when concentrating on an independent study project, being emotionally and socially reserved may be more conducive to succeeding on the project than being expressive and sociable. By the same token, trait EI theory recognizes that people's emotional experiences are both subjective and socially constructed and what may be an adaptive emotional response for one person, or in one cultural group, may be ineffectual

Table 3.1 The sampling domain of trait emotional intelligence in adults and adolescents

	High scorers perceive themselves as...
<i>Well-being</i>	
<i>Self-esteem</i>	...successful and self-confident.
<i>Trait happiness</i>	...cheerful and satisfied with their lives.
<i>Trait optimism</i>	...confident and likely to “look on the bright side” of life.
<i>Self-control</i>	
<i>Emotion control</i>	...capable of controlling their emotions.
<i>Stress management</i>	...capable of withstanding pressure and regulating stress.
<i>Impulse control</i>	...reflective and less likely to give into their urges.
<i>Emotionality</i>	
<i>Emotion perception (self and others)</i>	...clear about their own and other people’s feelings.
<i>Emotion expression</i>	...capable of communicating their feelings to others.
<i>Relationships</i>	...capable of having fulfilling personal relationships.
<i>Trait empathy</i>	...capable of taking someone else’s perspective
<i>Sociability</i>	
<i>Social awareness</i>	...accomplished networkers with excellent social skills.
<i>Emotion management (others)</i>	...capable of influencing other people’s feelings.
<i>Assertiveness</i>	...forthright, frank, and willing to stand up for their rights.
<i>Independent facets^a</i>	
<i>Adaptability</i>	...flexible and willing to adapt to new conditions.
<i>Self-motivation</i>	...driven and unlikely to give up in the face of adversity.

^aThese two facets feed directly into the global trait emotional intelligence score without going through any factor

for another (for a discussion of the role of culture, see Chap. 5 by Huynh, Oakes, & Grossmann, this volume).

Sampling Domain

Positioned within the realm of personality, the sampling domain of trait EI consists of lower-level personality facets and surface traits that are typically assessed on questionnaires of EI and cognate constructs (e.g., empathy, assertiveness, and adaptability). These facets are organized under four higher-order trait EI factors of emotionality, sociability, self-control, and well-being (see Table 3.1).

Because of the increasing complexity and differentiation of self-perceptions with age (Marsh & Ayotte, 2003), different trait EI sampling domains have been established for children and adults. These are presented in Tables 3.1 and 3.2, respectively. The adolescent sampling domain, which falls in-between, has been aligned

Table 3.2 The sampling domain of trait emotional intelligence in children

Facets	Brief description	Example items
<i>Adaptability</i>	Children's perceptions of how well they adapt to new situations and people	"I find it hard to get used to a new school year"
<i>Affective disposition</i>	Children's perceptions of the frequency and intensity with which they experience emotions	"I'm a very happy kid"
<i>Emotion expression</i>	Children's perceptions of how effectively they can express their emotions	"I always find the words to show how I feel"
<i>Emotion perception</i>	Children's perceptions of how accurately they identify their own and others' emotions	"It's easy for me to understand how I feel"
<i>Emotion regulation</i>	Children's perceptions of how well they can control their emotions	"I can control my anger"
<i>Low impulsivity</i>	Children's perceptions of how effectively they can control themselves	"I don't like waiting to get what I want"
<i>Peer relations</i>	Children's perceptions of the quality of their relationships with their classmates	"I listen to other children's problems"
<i>Self-esteem</i>	Children's perceptions of their self-worth	"I feel great about myself"
<i>Self-motivation</i>	Children's perceptions of their drive and motivation	"I always try to become better at school"

with the adult domain. As shown in these tables, the trait EI domain comprises 15 facets in adults, but only 9 in children. This key difference is also reflected in the factor structures of the trait EI construct in the two age groups, with four factors in adults (Petrides, 2009), but only two in children (Russo et al., 2012). Adolescent data, on the other hand, broadly follow the structure of adult data.

Relations Vis-à-Vis Basic Personality

Factor-analytic investigations of trait EI in relation to the Big Five and Giant Three personality taxonomies have shown that trait EI can be isolated as a coherent factor that is distinguishable from but nevertheless related to basic personality dimensions, particularly neuroticism (negatively) and extraversion (Pérez-González & Sanchez-Ruiz, 2014; Petrides et al., 2007; Petrides & Furnham, 2001).

Although theoretically meaningful, the empirical overlap of trait EI with the higher-order personality traits has raised legitimate concerns about its redundancy as a unique predictor of those criteria that are known to be associated with the Big Five (Harms & Credé, 2010). To this end, a recent meta-analysis of 114 incremental validity analyses of trait EI reported a statistically and practically significant overall effect size of 0.06, concluding that trait EI "consistently explains incremental variance in criteria pertaining to different areas of functioning, beyond higher order personality dimensions and other emotion-related variables" (Andrei, Siegling, Aloe, Baldaro, & Petrides, 2016, p. 261).

A separate, but related, line of research has examined the relationships between trait EI and the general factor of personality (e.g., Van der Linden, Tsousis, & Petrides, 2012). This uncovered a very high level of overlap between the two constructs, to the extent that it can be argued that trait EI is the integrating dimension of human adult personality (Van der Linden et al., 2016).

Trait EI Measurement in Children and Adolescents

A detailed overview and evaluation of the most oft-used measures in EI research can be found in Siegling, Saklofske, and Petrides (2015). In the present section, we focus specifically on four trait EI measures that have been widely used in research and practice with children and adolescents: the Assessing Emotions Scale (Schutte, Malouff, & Bhullar, 2009), the youth version of the Emotional Quotient Inventory (Wood, Parker, & Keefer, 2009), and the adolescent and child forms of the Trait Emotional Intelligence Questionnaire (Petrides, 2009). Despite the apparent overlap in content and format, these measures are based on quite different models and vary in terms of the facets used to operationalize trait EI. All four, however, share the characteristics of a superordinate trait EI factor and a self-report response format, although observer (e.g., parent, teacher, and peers) rating scales are also available in some cases.

The four measures will be reviewed in turn, featuring descriptions, norms, and basic reliability and validity evidence. A summary of their key features can be found in Table 3.3.

Assessing Emotions Scale (AES)

Description As one of the earliest non-commercial EI questionnaires available, the AES (Schutte et al., 1998) is one of the most widely used scales in EI research. Although it was developed for adults, it has also been used to assess trait EI in adolescents (Ciarrochi, Chan, & Bajgar, 2001). In terms of its content domain, the scale is based on Salovey and Mayer's (1990) four-branch ability EI model, comprising four ability domains: perceiving emotions, understanding emotions, managing emotions, and using emotions to facilitate thought (for full description of the four branches, see Chap. 2 by Fiori & Vesely-Maillefer, this volume). However, as its authors have noted (Schutte et al., 2009), the AES is more appropriately conceptualized as a measure of trait EI due to its self-report format. It is intended to measure EI as a superordinate construct, although different models comprising three or four first-order factors have been proposed (Austin, Saklofske, Huang, & McKenney, 2004; Austin, Saklofske, & Egan (2005); Ciarrochi et al., 2001; Gignac, Palmer, Manocha, & Stough, 2005; Ko & Siu, 2013; Petrides & Furnham, 2000; Saklofske, Austin, & Minski, 2003). The four factors have been labelled as perception of

Table 3.3 Assessment properties of trait EI measures for children and adolescents

Measure	Age range	No. of items	Facets or factors	Assessment time	Observer form available	Reading level
Assessing Emotions Scale (AES; Schutte et al., 1998)	Unspecified	33	Perception of emotions, managing own emotions, managing others' emotions (social skills), utilization of emotions	5 mins	–	Grade 5
Emotional Quotient Inventory – Youth Version (EQ-i:YV; Bar-On & Parker, 2000)	7–18	60 (30 for short form)	Intrapersonal, interpersonal, stress management, adaptability Ancillary scales: General mood, positive impression, inconsistency index	25 to 30 mins (10 to 15 mins for short form)	✓	Grade 4
Trait Emotional Intelligence Questionnaire – Adolescent Form (TEIQue–AF; Petrides, 2009)	11–17	153 (30 for short form)	Fifteen facets and four factors: Well-being, self-control, emotionality, Sociability	25 mins (10 mins for short form)	✓	Grade 4
Trait Emotional Intelligence Questionnaire – Child Form (TEIQue–CF; Mavroveli et al., 2008)	8–12	75 (36 for short form)	Adaptability, affective disposition, emotion expression, emotion perception, emotion regulation, low impulsivity, peer relations, self-esteem, Self-motivation	25 mins (10 to 15 mins for short form)	✓	Grade 3

emotion (ten items), managing own emotions (nine items), managing others' emotions or social skills (nine items), and utilization of emotion (six items; Schutte et al., 2009).

The AES consists of 33 items of low reading level (fifth grade), making it appropriate for use with adolescents. Average completion time is 5 minutes (Schutte et al., 2009). Items are responded to on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Norms In a sample of 131 Australian adolescents (73 males) aged 13 to 15 years ($M = 13.8$, $SD = 0.74$), mean scale scores were 3.65 ($SD = 0.42$) for global trait EI, 3.57 ($SD = 0.58$) for perceiving emotions, 3.63 ($SD = 0.42$) for managing others' emotions, 3.71 ($SD = 0.52$) for managing own emotions, and 3.69 ($SD = 0.66$) for utilizing emotions (Ciarrochi et al., 2001). Adolescent data from a Canadian sample (Charbonneau & Nicol, 2002) yielded a mean trait EI score of 3.77 ($SD = 0.44$), and from a Malaysian sample (Liau, Liau, Teoh, & Liau, 2003), a mean score of 4.00 ($SD = 0.34$). A study of Japanese adolescents and youth again showed very similar mean scores and standard deviations for both the global trait EI score and the four factors (Fukuda et al., 2011).

Reliability Satisfactory internal reliabilities have been observed for global trait EI ($\alpha = 0.84$) and the perception subscale ($\alpha = 0.76$) in Australian adolescents, with lower alphas for the remaining subscales, ranging from 0.55 for utilizing emotions to 0.66 for managing others' emotions (Ciarrochi et al., 2001). Internal reliabilities have also been satisfactory at the global level in Malaysian ($\alpha = 0.76$; Liau et al., 2003) and Canadian ($\alpha = 0.84$; Charbonneau & Nicol, 2002) adolescents, as well as in Japanese youth ($\alpha = 0.89$; Fukuda et al. 2011). An adaptation for Chinese adolescents yielded an alpha of 0.67 for the total AES score and a range from 0.60 (regulation of emotion) to 0.83 (appraisal of emotion) for the four factors (Ko & Siu, 2013). The test-retest reliability of the English AES has yet to be investigated in adolescents. However, over a 4-week period, test-retest correlations for the Chinese version ranged from 0.75 to 0.84 (Ko & Siu, 2013).

Validity The AES scores correlate positively with the ability to identify emotional expressions, level of social support, satisfaction with social support received, and mood management behavior, even after controlling for the closely related constructs of self-esteem and trait anxiety (Ciarrochi et al., 2001). A recent study showed a negative association between the AES scores and attitudes toward cigarette smoking (Abdollahi, Yaacob, Talib, & Ismail, 2015). Employing a Japanese sample, Fukuda et al. (2011) replicated the four-factor structure of the AES and reported that the global score correlated at 0.75 with the Wong and Law (2002) Emotional Intelligence Scale. The AES scores have been shown to account for variance in alexithymia, depression, and life satisfaction, over and above the Big Five, in adolescents and youth (e.g. Austin et al., 2005; Saklofske Austin, & Minski, 2003).

Availability The AES is a public-domain measure and can be found in Schutte et al. (1998). In addition, the AES has been adapted into different languages, such as Hebrew (Carmeli, 2003), Polish (Ogińska-Bulik, 2005), Swedish (Sjoberg, 2001), and Turkish (Yurtsever, 2003).

Emotional Quotient Inventory: Youth Version (EQ-I:YV)

Description The EQ-i:YV (Bar-On & Parker, 2000) is an age-appropriate adaptation of the adult Emotional Quotient Inventory (EQ-i; Bar-On, 1997) for use with children and adolescents 7–18 years. It should be noted that Bar-On (2006) is explicit in his claim that his EI model does not measure personality traits but rather “*competencies, skills, and facilitators*” (p. 14; italics in the original). Thus, Bar-On’s instrument (EQ-i) is interpreted as a measure of trait EI only from the perspective of trait EI theory (e.g., Keefer, Holden, & Parker, 2013), which provides a valid conceptual framework for all EI questionnaires alike.

Like the adult EQ-i form, the EQ-i:YV measures four broad EI domains outlined in Bar-On’s (2006) model: (1) intrapersonal, which assesses perceived ability to label, express, and communicate one’s own emotions; (2) interpersonal, which measures perceived ability to understand, respect, and empathize with the feelings of others; (3) stress management, which measures perceived emotional reactivity and ability to downregulate upsetting emotions; and (4) adaptability, which assesses perceived ability to appraise, problem solve, and persevere in challenging situations. In addition to the four EI scales, the EQ-i:YV contains three ancillary scales that are not included in the global EI score: general mood, a measure of positive emotionality and well-being; positive impression, an index of socially desirable responding; and inconsistency, an index of aberrant responding. The latter two are validity indices that may be used to determine the accuracy of self-reports.

The EQ-i:YV comprises 60 items rated on a 4-point scale, with responses ranging from 1 (*very seldom true of me*) to 4 (*very often true of me*). It can be completed in 25–30 minutes and has a Grade 4 reading level (Wood et al., 2009). A short 30-item form (EQ-i:YV-S) that omits the general mood scale and inconsistency index is also available; it has completion time of 10–15 minutes. Parent and teacher forms (EQ-i:YV-O) are also available and have shown promising results in the assessment of trait EI in children from the perspective of significant others (Wood et al., 2009). These forms consist of 38 items, rated by observers on a 4-point scale.

Norms The EQ-i:YV norms are based on a sample of over 9000 children and adolescents from North America, aged 7 to 18, with a mean age of 11.6 years ($SD = 3.1$) (Bar-On & Parker, 2000). The EQ-i:YV technical manual provides gender- and age-specific scoring norms for four different age groups (7–9, 10–12, 13–15, and 16–18 years of age). Using these norms, raw scores can be converted into standard T scores with a mean of 100 and a standard deviation of 15, to facilitate interpretation and comparison of individual results.

Reliability The internal consistency reliabilities for the long and short forms of the EQ-i:YV range from 0.65 to 0.90 based on the large North American normative sample (Bar-On & Parker, 2000). Alpha coefficients are lower (0.65–0.80) for younger children (age 7–9) but become progressively higher in every subsequent age group, reaching excellent levels (0.83–0.90) for older adolescents (age 16–18).

Test-retest reliability over a 3-week period suggested high temporal stability, with coefficients ranging from 0.84 for the interpersonal subscale to 0.89 for global trait EI. In a follow-up study, similar results were reported, ranging from 0.77 for general mood to 0.89 for global trait EI (Wood et al., 2009).

Validity The EQ-i:YV measurement structure has been supported in several studies, including Aboriginal and non-Aboriginal children and youth in Canada (Parker et al., 2005), while other studies have supported the EQ-i:YV-S measurement structure in countries outside of North America, such as Lebanon (El Hassan & El Sader, 2005) and Hungary, albeit not for all of its items (Kun et al., 2012). Parker, Creque et al. (2004) presented criterion validity data showing that global trait EI and three subscales (adaptability, interpersonal, and stress management) were higher in academically successful high school students. Similarly, Brouzos, Misailidi, and Hadjimatheou (2014) found a positive relationship between the EQ-i:YV scores and academic achievement and teacher-rated adaptive functioning, but only in 11- to 13-year-olds (and not in 8- to 10-year-olds). A longitudinal study showed that the EQ-i:YV scores measured in Grade 7 predicted academic success in Grade 11 (Qualter, Gardner, Pope, Hutchinson, & Whiteley, 2012).

Parker, Taylor, Eastabrook, Schell, and Wood (2008) showed that the EQ-i:YV is a strong predictor of addiction behaviors, like gambling, internet use, and video game playing in adolescence. In adolescent girls, the intrapersonal and interpersonal scales were negatively related to sexual risk behaviors, like number of male sex partners in the past 6 months (Lando-King et al., 2015). Combined self-ratings and observer (parent and teacher) ratings of 169 gifted students (Grades 4–8) revealed low-to-moderate self-other correlations and moderate inter-rater (parent-teacher) correlations (Schwean, Saklofske, Parker, & Kloosterman, 2006).

Availability The EQ-i instruments are published and sold commercially by Multi-Health Systems.

Trait Emotional Intelligence Questionnaire–Adolescent Form (TEIQue–AF)

The TEIQue instruments (Petrides, 2009) have been developed more recently on the basis of trait EI theory (Petrides et al., 2007; Petrides, 2010) and thus provide direct operationalizations of it, which is crucial for meaningful interpretation of data. The adult TEIQue form and its adolescent (TEIQue–AF) and child (TEIQue–CF) derivatives provide comprehensive coverage of their respective trait EI sampling domains (see Tables 3.1 and 3.2).

Description The TEIQue–AF (Petrides, 2009) is suitable for adolescents aged 13–17 years. It is based on the same sampling domain as the adult form and yields scores on the four broad trait EI factors of well-being, self-control, emotionality,

and sociability (see Table 3.1). The full-length TEIQue–AF consists of 153 items and has a completion time of approximately 30 minutes. A 30-item short form (TEIQue–ASF) can be completed in 10 minutes and has been used successfully for children as young as 11 years (Petrides, Sangareau, Furnham, & Frederickson, 2006). It is intended to assess global trait EI but can also yield usable factor, albeit not facet, scores. Both full-length and short-form TEIQue–AF use a 7-point Likert-type response scale, ranging from 1 (*Disagree completely*) to 7 (*Agree completely*). Peer ratings can be obtained for the full-length and short-form TEIQue–AF through the relevant TEIQue–360° versions (Petrides, 2009).

Norms In a large sample of adolescents ($N = 1842$; age range, 14–16 years; Petrides, 2009), TEIQue–AF descriptive statistics were global trait EI ($M = 4.53$, $SD = 0.58$), emotionality ($M = 4.71$, $SD = 0.67$), self-control ($M = 4.01$, $SD = 0.75$), sociability ($M = 4.65$, $SD = 0.73$), and well-being ($M = 4.89$, $SD = 0.96$). Very similar values were observed in a sample of 351 Italian adolescents (163 males; mean age = 15.3 years; $SD = 1.80$; age range, 14–18 years): global trait EI ($M = 4.57$, $SD = 0.51$), emotionality ($M = 4.72$, $SD = 0.69$), self-control ($M = 4.06$, $SD = 0.68$), sociability ($M = 4.65$, $SD = 0.67$), and well-being ($M = 5.00$, $SD = 0.89$) (Andrei, Mancini, Trombini, Baldaro, & Russo, 2014).

Reliability In adolescents, Cronbach's alphas for global trait EI have been reported at 0.83 (Mikolajczak, Petrides, & Hurry, 2009) and 0.89 (Petrides, 2009). At the factor level, alpha coefficients were 0.74 for emotionality, 0.76 for self-control, 0.80 for sociability, and 0.85 for well-being (Petrides, 2009). In an Italian sample, reliability coefficients were 0.85 for global trait EI, 0.82 for well-being, 0.63 for self-control, 0.74 for emotionality, and 0.67 for sociability. In the same sample, alphas for eight facets were low-to-moderate (0.50–0.67; Andrei et al., 2014).

Validity In line with trait EI theory, TEIQue–AF scores are orthogonal to cognitive ability and significantly related to higher-order personality dimensions (Andrei et al., 2014). The TEIQue–ASF global score has been shown to correlate positively with adaptive and negatively with maladaptive coping strategies (Mavroveli, Petrides, Rieffe, & Bakker, 2007).

Multiple studies have examined the measure's incremental validity vis-à-vis various criteria, such as disruptive behavior and depression, after controlling for demographics, personality, and cognitive ability (Davis & Humphrey, 2012); aspects of psychopathology, after controlling for gender, another trait EI measure, and ability EI (Williams, Daley, Burnside, & Hammond-Rowley, 2010); socioemotional variables, after controlling for their baseline levels and cognitive ability (Frederickson, Petrides, & Simmonds, 2012); somatic complaints, after controlling for depression (Mavroveli et al., 2007); teacher-rated academic achievement, after controlling for cognitive ability, personality, and self-concept (Ferrando et al., 2011); emotional maladjustment, after controlling for gender, cognitive ability, and personality (Andrei et al., 2014); socioemotional variables, after controlling for

coping strategies and demographics (Siegling, Vesely, Saklofske, Frederickson, & Petrides, 2017; Study 1); and academic achievement, after controlling for cognitive ability and gender (Siegling, Vesely, et al., 2017; Study 2).

Availability All TEIQue instruments are available, free of charge, and in multiple languages for research purposes via www.psychometriclab.com.

Trait Emotional Intelligence Questionnaire – Child Form (TEIQue–CF)

Description The main aim of the TEIQue–CF (Mavroveli, Petrides, Shove, & Whitehead, 2008) is to assess the emotion-related facets of child personality. Rather than a simple adaptation of the adult form, this variant is based on a sampling domain that has been specifically developed for children aged between 8 and 12 years. Thus, the TEIQue–CF assesses nine distinct facets in the children’s sampling domain presented in Table 3.2 (Mavroveli et al., 2008). The measure comprises 75 items, responded to on a 5-point scale, ranging from 1 (*Disagree completely*) to 5 (*Agree completely*). Completion time is approximately 25 minutes. A short form (TEIQue–CSF) with 36 items and completion time of 10–15 minutes is also available.

Norms In a sample of children with a mean age of 9.12 years ($SD = 1.27$), boys ($n = 274$) had a global trait EI score of 3.55 ($SD = 0.43$), which was significantly lower than that of girls ($M = 0.65$, $SD = 0.45$; $n = 286$; Mavroveli & Sánchez-Ruiz, 2011).

Reliability Cronbach’s alpha was 0.82 for the TEIQue–CF global score and ranged from 0.58 for adaptability to 0.76 for affective disposition at the level of the nine facets (Mavroveli et al., 2008). In a sample of preadolescents ($N = 139$, mean age: 11.23 years), Cronbach’s alpha was at 0.76 (Mavroveli et al., 2008). At the facet level, alphas ranged from 0.57 for adaptability and emotion perception to 0.76 for affective disposition (Mavroveli & Sanchez-Ruiz, 2011). Test-retest reliability was examined over a 3-month period in a mixed-gender sample; the attenuated and disattenuated coefficients were 0.79 and 1.00, respectively (Mavroveli et al., 2008).

Validity In line with trait EI theory, global TEIQue–CF scores are unrelated to cognitive ability while correlating moderately with all personality dimensions (extraversion, emotional stability, agreeableness, openness, and conscientiousness), as well as with social acceptance (positively) and social rejection (negatively; Andrei, Mancini, Mazzoni, Russo, & Baldaro, 2015). They also correlate weakly with verbal ability and literacy ($r = 0.15$ and 0.10 ; Andrei et al., 2015; Mavroveli et al., 2008) and moderately with teacher-rated behavioral and social problems ($r = -0.34$; Mavroveli & Sanchez-Ruiz, 2011). Moreover, the TEIQue–CF scores

differentiated between pupils with a school record of unauthorized absences or exclusions and controls and predicted teacher-rated positive ($r = 0.24$) and negative ($r = -0.34$) behavior (Mavroveli et al., 2008).

Availability All TEIQue instruments are available, free of charge, and in multiple languages for research purposes via www.psychometriclab.com.

Role of Trait EI in Primary and Secondary Education

Trait EI and Adjustment Outcomes

School adaptation, especially in the early years of education, can be challenging, as children draw on a range of resources to adjust and thrive in their school environment. Trait EI has been linked to greater overall well-being, characterized by fewer depressive symptoms and somatic complaints in adolescents (Davis & Humphrey, 2012; Mavroveli et al., 2007; Siegling, Vesely, et al., 2017, Study 1). Trait EI has also been positively linked to adaptive school behaviors, such as increased nominations from peers and teachers for positive social attributes, like leadership and kindness (Mavroveli et al., 2008; Mavroveli, Petrides, Sangareau, & Furnham, 2009), and negatively linked to maladaptive behaviors, like aggression and delinquency (Santesso, Dana, Schmidt, & Segalowitz, 2006). In a study by Andrei et al. (2015), trait EI correlated positively with peer acceptance and negatively with peer rejection in children aged 8–10 years. Similarly, Mavroveli et al. (2009; see also Mavroveli & Sanchez Ruiz, 2011) reported that children high in trait EI received more nominations from their peers for being kind and having leadership qualities and fewer nominations for bullying behavior.

Research on trait EI and peer bullying and victimization has been particularly active in recent years. Kokkinos and Kipritsi (2012) replicated earlier reports of negative correlations between total trait EI score and experiences of bullying and victimization in a sample of Greek children. Other studies have focused on understanding the connections between specific dimensions of trait EI and different types of bullying behaviors, using samples of children and adolescents from Australia, Italy, and the USA (Baroncelli & Ciucci, 2014; Gower et al., 2014; Lomas, Stough, Hansen, & Downey, 2012; Polan, Sieving, & McMorris, 2013; Schokman et al., 2014). Of the various trait EI factors, emotion management/regulation emerged as the single most consistent predictor of bullying involvement across these studies, with both bullies and victims reporting low self-perceptions in this trait EI domain. This finding was consistent regardless of the type of bullying examined (e.g., physical, relational, and cyberbullying).

A recent review of studies on trait EI and aggression similarly concluded that there was strong evidence that children, adolescents, and adults high in trait EI engage in less aggressive behavior of all types (García-Sancho, Salguero, & Fernández-Berrocal, 2014). Accordingly, many anti-bullying programs are now

integrated within a broader school-wide social and emotional learning (SEL) framework, recognizing the benefits of SEL not only for improved peer relationships but also for a host of other developmental and academic outcomes (see Chap. 9, Espelage, King, & Colbert, this volume).

Lastly, an important link has been discovered between trait EI and school absenteeism (Mavroveli et al., 2008; see also Petrides, Frederickson, & Furnham, 2004), showing that children high in trait EI have fewer unauthorized absences and are less likely to have been expelled from school than their low trait EI peers. This effect suggests a positive influence on school adaptation and engagement in childhood (Mavroveli et al., 2007; Mavroveli et al., 2009).

Trait EI and Academic Achievement

Academic achievement has been traditionally linked to cognitive intelligence (Brody, 2000; Gottfredson, 2003; Laidra, Pullmann, & Allik, 2007); however, there has also been research interest in the potential role of non-cognitive variables, including personality and social constructs (Furnham, Chamorro-Premuzic, & McDougall, 2002; Petrides, Chamorro-Premuzic, Frederickson, & Furnham, 2005; Poropat, 2009).

To date, the results across child and adolescent samples suggest the presence of a moderate positive effect of trait EI on academic performance (Perera & DiGiacomo, 2013). A direct relationship between trait EI and scholastic achievement has been reported in a number of studies involving primary-aged children and adolescents, as can be seen in Table 3.4 (Di Fabio & Palazzeschi, 2009; Downey, Mountstephen, Lloyd, Hansen, & Stough, 2008; Ferrando et al., 2011; Mancini et al., 2017; Mavroveli et al., 2008; Parker, Creque, et al., 2004; Siegling, Vesely, et al., 2017, Study 2). These studies showed a direct positive association between trait EI and academic achievement using objective grade point average (GPA) or subject-specific marks.

Gender-specific effects have been reported in some studies (Andrei et al., 2015; Costa & Faria, 2015; Mavroveli & Sanchez-Ruiz, 2011); however, the findings have not consistently favored one gender or the other. Rather, they tend to be subject- or grade-specific (see Table 3.4). With regard to age effects, younger children seem to benefit more from high trait EI scores than their older counterparts, although there is significant variation in this set of findings, too (e.g., Costa & Faria, 2015; Petrides et al., 2004; see Table 3.4). In these studies, however, one should consider the influence of verbal ability, which could be biasing the results obtained in primary education, because language-skilled pupils may be selecting more socially desirable responses than their less skilled counterparts (Mavroveli & Sanchez-Ruiz, 2011).

Cognitive ability has been proposed as a moderator of the relationship between trait EI and academic performance (Mavroveli & Sanchez-Ruiz, 2011; Petrides et al., 2004). Specifically, Petrides et al. (2004) posited that such effects as trait EI might have on academic performance are likely to assume prominence when the

demands of a situation tend to outweigh a pupil's intellectual resources. This is because, in contrast to their high IQ counterparts, low IQ pupils are more likely to be forced to draw on resources other than their cognitive ability in order to cope with the demands of their courses and examinations.

Agnoli et al. (2012) showed a direct effect of trait EI on math and language performance and a significant interaction between cognitive ability and trait EI, with high trait EI scores benefiting children with low and medium cognitive ability in language performance only. Qualter et al. (2012) contributed to this line of research with a longitudinal investigation of personality, cognitive ability, and trait EI, which demonstrated direct effects of trait EI in math, English language, English literature, and science, in boys only. In girls, the intrapersonal, interpersonal, and adaptability trait EI dimensions were related to math, English Language, and English literature grades, respectively.

Structural equation models with personality and cognitive ability variables have also revealed a significant predictive effect of trait EI on school grades, but only in boys. In their study, Andrei et al. (2015) reported that the effects of trait EI on academic achievement (math and language) did not persist in the presence of nonverbal IQ (see also Qualter et al., 2012). In contrast, Di Fabio and Palazzeschi (2009) observed incremental effects of trait EI on GPA over and above fluid intelligence and the Giant Three personality dimensions.

Despite fairly intensive research over the past 15 years, the mechanisms underlying the relationship between trait EI and academic performance in childhood and adolescence are generally unknown (see Table 3.4). This is, at least partially, attributable to psychometric difficulties (e.g., the use of substandard measures and poorly operationalized criteria), the dearth of well-controlled longitudinal studies, and the unsystematic application of trait EI theory to the design, implementation, and interpretation of research studies in the field.

Role of Trait EI in Higher Education

Trait EI and Adjustment Outcomes

Trait EI is linked to a wide range of mental and physical health variables in adults, like anxiety, depression, hospitalization rates, and legal drug use (Martins et al., 2010; Mikolajczak, Avalosse, et al., 2015). In the context of higher education, trait EI is negatively associated with perceived stress (e.g., Forushani & Besharat, 2011), anxiety and depressive symptomatology (Extremera & Berrocal, 2006), and addiction-related problems (for a review, see Kun & Demetrovics, 2010) and positively associated with peer liking (Song et al., 2010), perceived social support, and general psychological adjustment (Perera & DiGiacomo, 2015). Given that adjustment difficulties are one of the most common predictors of university attrition, it is not surprising that students who enter university with higher trait EI scores are less likely than their low-scoring peers to drop out early (Parker, Hogan, Eastabrook,

Table 3.4 Summary of studies on trait EI and academic achievement in children and adolescents

Citation	Measure of trait emotional intelligence	Academic achievement measure	Sample	Results
Siegling, Vesely, Saklofske, Frederickson, & Petrides (2017)	TEIQue-ASF	National Curriculum level in English, math, and science	$N = 357-491$, Age = 11–13 years; UK	Trait EI predicted academic achievement in English, math, and science over and beyond cognitive ability and gender
Andrei, Mancini, Mazzoni, Russo, & Baldaro (2015)	TEIQue-CF	Mean score in language literacy and math	$N_1 = 376$, $M_{(age)} = 9.39$ years $N_2 = 202$, $M_{(age)} = 12.05$ years; Italy	Trait EI related to both math and literacy scores ($r = 0.30^{***}$ and $r = 0.29^{***}$, respectively). However, it did not show incremental effects after controlling for the Big Five, IQ, and gender
Costa, & Faria (2015)	Emotional Skills and Competence Questionnaire (ESCCQ)	Math, Portuguese grades, and GPA	$N = 380$, $M_{(age)} = 15.4$ years; Portugal	Path analysis showed that trait EI predicted math in 10th grade students and GPA (in boys only)
Agnoli, Mancini, Pozzoli, Baldaro, Russo, & Surcinelli (2012)	TEIQue-CF	Language and math grades	$N = 352$ (188 females), $M_{(age)} = 9.35$ years; Italy	Trait EI positively correlated with math and language performance ($r = 0.13^*$ & $r = 0.18^{**}$, respectively). Low and medium IQ children with high trait EI exhibited better language performance ($b = 0.66$, $SE = 0.11$, $t = 5.99^{***}$; $b = 0.37$, $SE = 0.11$, $t = 3.36^{**}$, respectively)
Qualter, Gardner, Pope, Hutchinson, & Whiteley (2012)	EQ:i:YV	GCSE in English language, English literature, math, and science	$N = 413$ (214 females); year 11; UK	The adaptability, stress management, and interpersonal subscales predicted academic performance on math, English language, English literature, and science. Structural equation modeling showed that trait EI predicted GCSE performance in boys only

(continued)

Table 3.4 (continued)

Citation	Measure of trait emotional intelligence	Academic achievement measure	Sample	Results
Ferrando et al. (2011)	TEIQue-ASF	Head-teacher-rated general academic performance	$N = 290$ (136 females), $M_{(age)} = 11.53$ years; Spain	Trait EI showed incremental validity over IQ, personality, and self-concept ($\beta = 0.20$, $t = 2.10^*$) in predicting general academic performance
Yazici, Seyis, & Altun (2011)	Emotional Intelligence Scale (Ergin, 2000)	Average score	$N = 407$ (171 females), $M_{(age)} = 11.16$ years; Turkey	Only the emotional awareness ($\beta = 0.18^{**}$) subscale predicted academic achievement
Mavroveli et al. (2009)	TEIQue-CF	End-of-year teacher assessment scores in math and English	$N = 140$ (63 females), $M_{(age)} = 9.26$ years; UK	Correlations between trait EI and English and math scores were significant in the total sample ($r = 0.24^{**}$ and $r = 0.25^{**}$, respectively) but did not persist after controlling for age and nonverbal IQ
Di Fabio & Palazzeschi (2009)	EQ-i: Short form	GPA	$N = 124$ (90 female), $M_{(age)} = 17.49$ years; Italy	Trait EI demonstrated incremental validity for predicting GPA over both fluid intelligence and the Giant Three (extraversion, neuroticism, and psychoticism). Results held for global scores ($\beta = 0.23^*$, $\Delta R^2 = 0.05^*$) and jointly for the factor scores ($\Delta R^2 = 0.06^*$)
Mavroveli et al. (2008)	TEIQue-CF	Key stage 2 SAT scores in English, math, science, NFER reading, and spelling scores	$N = 139$ (69 girls), $M_{(age)} = 11.23$ years; UK	Trait EI scores correlated positively with spelling scores ($r = 0.28^{**}$) only. Gender-specific analyses revealed that trait EI was unrelated to English, science, and reading scores but was moderately related to math ($r = 0.29^*$) and spelling scores ($r = 0.38^{**}$), in boys only. With the exception of spelling (total sample: $r = 0.25^*$; boys: $r = 0.29^*$), these correlations lost their significance when controlling for verbal intelligence

Downey, Mountstephen, Lloyd, Hansen, & Stough (2008)	Adolescent Swinburne University Emotional Intelligence Test (SUEIT-A)	GPA and 8 subject grades	<p>$N = 209$ (123 females), $M_{(age)} = 13.8$ years, range = 12–17 years; Australia</p>	<p>Global trait EI correlated with GPA ($r = 0.15^*$) and grades in geography ($r = 0.27^{**}$) and science ($r = 0.14^*$). Emotion management and control subscale correlated with GPA ($r = 0.14^*$) and grades in math ($r = 0.24^{**}$) and science ($r = 0.19^*$). Understanding emotions subscale correlated with grades in art ($r = 0.34^{**}$), geography ($r = 0.28^{**}$), and science ($r = 0.18^*$).</p> <p>Low-achieving students (GPA 20th percentile or lower) scored lower on global trait EI, emotion management and control, and understanding emotions subscales than average-achieving students (GPA between 20th and 80th percentile) or high-achieving students (GPA 80th percentile or higher)</p>
Petrides, Frederickson, & Furnham (2004)	TEIQue	Key stage 3 assessment (KS3) results	<p>$N = 650$ (48% female), $M_{(age)} = 16.5$ years; UK</p>	<p>Trait EI moderated the relationship between cognitive ability and academic achievement</p> <p>Trait EI moderated the effect of IQ on English and overall GCSE performance</p> <p>High trait EI was associated with better academic achievement across a range of low IQ scores, but the relationship reversed at IQ scores of about +1 SD</p>

(continued)

Table 3.4 (continued)

Citation	Measure of trait emotional intelligence	Academic achievement measure	Sample	Results
Parker, Creque, Barnhart, Harris, Majeski, Wood, Bond, & Hogan (2004)	EQ-i:YV	GPA	<i>N</i> = 667 (363 females), Age = 14–18 years; USA	Trait EI correlated with academic achievement ($r = 0.33^*$). High-achieving students (GPA 80th percentile or higher) scored higher on the interpersonal, adaptability, and stress management subscales than average-achieving students (GPA between 20th and 80th percentile), who, in turn, scored higher than low-achieving students (GPA 20th percentile or lower)

Note. GPA = grade point average. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; ? = Relevant information was not available. Research papers with incomplete reporting were omitted.

Oke, & Wood, 2006; Qualter, Whiteley, Morley, & Dudiak, 2009) and more likely to complete their studies and graduate with a degree (Keefer, Parker, & Wood, 2012; Parker, Saklofske, & Keefer, 2016).

Trait EI and Academic Achievement

In tertiary education, a meta-analysis of the impact of non-cognitive factors on academic performance revealed moderate correlations with GPA (Richardson, Abraham, & Bond, 2012). Specifically with respect to trait EI, our review of the recent literature (from 2010 to date) shows a rather inconsistent pattern of associations, similar to that found in earlier reviews (Mavroveli & Sanchez-Ruiz, 2011). Out of the 13 studies presented in Table 3.5, three reported nonsignificant results, while the rest reported weak-to-moderate correlations, which is in line with other studies and meta-analyses (e.g., Parker, Summerfeldt, et al., 2004; Perera & DiGiacomo, 2013). Even though the effects may not be strong, our review indicates that trait EI does predict unique variance in academic performance in higher education over and above gender (Pope, Roper & Qualter, 2012), cognitive abilities (Song et al., 2010), and the Big Five personality traits (Sanchez-Ruiz, Mavroveli, & Poullis, 2013).

Various trait EI facets and factors have shown significant correlations with academic performance. Overall, adaptability (Fallahzadeh, 2011; Parker, Summerfeldt et al., 2004; Pope et al., 2012; Saklofske et al., 2012), stress management (Fallahzadeh, 2011; O'Connor & Little, 2003; Parker, Summerfeldt, et al., 2004), and empathy (Pope et al., 2012) have been salient predictors among the 15 facets, while well-being has been a salient predictor among the 4 factors (Shipley, Jackson, & Segrest, 2010). In any case, more extensive research is needed at the facet and factor levels in order to increase our confidence and understanding of trait EI's role in academic achievement.

Differences across academic subjects A few studies have uncovered differences in the trait EI profiles of students from different academic domains. For example, Pérez and Castejón (2005) found that students enrolled in education-related majors scored higher in global trait EI than those enrolled in technical studies. Similarly, Sanchez-Ruiz et al. (2010) reported higher scores on the emotionality factor of trait EI among arts and social sciences students than among technical studies students. More recently, psychology students scored higher on trait EI than computer science, electrical engineering, and business and management students (Sanchez-Ruiz, Mavroveli, & Poullis, 2013).

In addition, trait EI and its factors seem to have differential impact on academic performance across different academic subjects, which likely contributes to the inconsistencies in the literature. A number of studies have investigated the link between trait EI and academic performance in specific subjects. Overall, the link seems to be more reliable in health-related professions, such as nursing or the medi-

Table 3.5 Summary of studies on trait EI and academic achievement in postsecondary settings

Citation	Measure of emotional intelligence	Academic achievement measure	Sample	Results
Perera & DiGiacomo (2015)	TEIQue–short form	Semester-end GPA	$N = 470$ freshmen students; 61.7% female; $M_{(age)} = 17.77$; Australia	The relationship between trait EI and academic performance was mediated by engagement coping and academic adjustment
Fernandez, Salamonsen, & Griffiths (2012)	TEIQue–short form	GPA	$N = 81$ nursing students; 80% female; $M_{(age)} = 29$; Australia	Trait EI was a significant predictor of academic achievement ($b = 0.25$, $p < 0.05$; $F(2, 78) = 5.26$, $p < 0.01$; Adj. $R^2 = 0.12$)
Sanchez-Ruiz, Mavrouveli & Poullis (2013)	TEIQue–short form	GPA	$N = 323$ undergraduates (113 female); $M_{(age)} = 23$; Cyprus	Trait EI correlated with academic performance ($r = 0.35^{***}$) Trait EI significantly predicted academic performance over and above cognitive ability and traditional personality dimensions The Big Five personality traits were added to the equation ($b = 0.24^{***}$; $F(7, 302) = 7.3^{***}$, Adj $r^2 = 0.13$). At this stage, the model explained significantly more variance in the outcome measure than at step 2; $\Delta F(7, 296) = 9.43$, $\Delta R^2 = 0.03^{***}$
Saklofske, Austin, Mastoras, Beaton & Osborne (2012)	EQ-i	End-of-year GPA	$N = 238$ undergraduates (185 female); $M_{(age)} = 20.03$; Scotland	Significant correlation between academic performance and the adaptability subscale ($r = 0.17^*$)
Fallahzadeh (2011)	EQ-i: Short form	GPA	$N = 223$ Medical science students; 153 female; $M_{(age\ males)} = 22.73$; $M_{(age\ females)} = 23.02$; Iran	Low-to-moderate correlations were found between academic performance and trait EI ($r = 0.14^*$) and in particular the stress management ($r = 0.15^*$) and adaptability ($r = 0.16^*$) subscales

<p>Pope, Roper, & Qualter (2012)</p>	<p>Emotional Competence Inventory Version 2 (ECI-U II)</p>	<p>Average percentage mark (APM)</p>	<p>$N = 135$ undergraduates; 97 female; $M_{(age)} = ?$; UK</p>	<p>Global trait EI did not significantly predict academic performance, but when the individual subscales were entered together in the regression equation, they explained 15% of the variance after controlling for gender; $F(6, 90) = 3.60^{**}$. None of them were individually significant predictors of performance Specific trait EI subscales were associated with academic performance, including adaptability ($r = 0.31^{**}$) and empathy ($r = 0.25^*$)</p>
<p>Olatoye, Akintunde & Yakasai (2010)</p>	<p>Wong and Law Emotional Intelligence Scale (WLEIS)</p>	<p>Cumulative GPA</p>	<p>$N = 235$ business students; 122 female; $M_{(age)} = 23$; Nigeria</p>	<p>Nonsignificant correlations between trait EI and academic performance</p>
<p>Suliman (2010)</p>	<p>EQ-i</p>	<p>GPA</p>	<p>$N = 98$ nursing students; all female; Saudi Arabia</p>	<p>Nonsignificant correlations between trait EI and academic performance</p>
<p>Shiple, Jackson, & Segrest (2010)</p>	<p>TEIQue-short form</p>	<p>GPA</p>	<p>$N = 193$ business students; 48% female; $M_{(age)} = 19-29$. Country = ?</p>	<p>Nonsignificant correlations between trait EI and academic performance Students in midrange GPA scored significantly higher on the trait EI Well-being factor than those in low- and high-range GPA; $F(2, 191) = 4.23^*$</p>
<p>Song, Huang, Peng, Law, Wong, & Chen (2010)</p>	<p>Wong and Law Emotional Intelligence Scale (WLEIS)</p>	<p>S1: GPA S2: Course grades</p>	<p>S1: $N = 222$; 47% female; $M_{(age)} = 21.30$; China. S2: $N = 124$; 60.5% female; $M_{(age)} = ?$; China</p>	<p>S1: Academic achievement correlated with trait EI ($r = 0.22^{**}$). Trait EI showed incremental validity over general mental abilities in predicting academic performance ($\beta = 0.17$, $\Delta R^2 = 0.03^{**}$). S2: Trait EI showed incremental validity in predicting course grade after controlling for general mental abilities and several other variables ($\beta = 0.24$, $\Delta R^2 = 0.03^*$)</p>

(continued)

Table 3.5 (continued)

Citation	Measure of emotional intelligence	Academic achievement measure	Sample	Results
Parker, Summerfeldt, Hogan, & Majeski (2004)	EQ-i: Short form	End-of-first-year GPA	N = 372 first-year university students; 294 female; $M_{(age)} = 19.34$; Canada	First-year GPA correlated with total trait EI ($r = 0.20^*$) and the intrapersonal ($r = 0.27^*$), stress management ($r = 0.32^*$), and adaptability ($r = 0.37^*$) subscales Successful students (first-year GPA of 80% or higher) scored higher on total trait EI and the intrapersonal, adaptability, and stress management subscales compared to unsuccessful students (first-year GPA < 60%). These subscales were better predictors of first-year university GPA than high school grades
O'Connor & Little (2003)	EQ-i	GPA	N = 90; 37 female; Age = 18–32; USA	Global trait EI ($r = 0.23^*$) and the intrapersonal ($r = 0.22^*$) and stress management ($r = 0.29^{**}$) subscales correlated with academic achievement
Newsome, Day, & Catano (2000)	EQ-i	GPA	N = 180 university students; 118 female; $M_{(age)} = 21$; USA	No significant relationships were found between trait EI and GPA

Note. GPA = grade point average; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; ? = Not reported

cal sciences (Austin, Evans, Goldwater, & Potter, 2005; Fallahzadeh, 2011; Fernandez et al., 2012) than in business-related majors (Olatoye, Akintunde, & Yakasai, 2010; Shipley et al., 2010). However, methodological challenges, such as the use of poorly operationalized criteria, mean that further systematic research is needed in order to elucidate fully the mechanisms through which trait EI impacts on academic performance across specific educational domains.

Mediating pathways Research must also start taking into account possible indirect routes through which trait EI may be exerting influence on academic performance. For example, trait EI has been shown to predict important factors for a successful teaching and learning experience, such as critical thinking and collaborative learning (Fernandez, Salamonson, & Griffiths, 2012), cognitive and affective engagement (Maguire, Egan, Hyland, & Maguire, 2017), and creative skills (Sanchez-Ruiz, Hernández-Torrano, Pérez-González, Batey, & Petrides, 2011). Past work has also shown that emotional self-efficacy enhances academic self-efficacy, which, in turn, improves academic performance (Adeyemo, 2007; Hen & Goroshit, 2014).

In a recent study, Perera and DiGiacomo (2015) tested several pathways through which trait EI may indirectly affect academic achievement. In the first pathway, trait EI impacted academic achievement through greater perceived social support, which increased students' positive affect and, in turn, academic performance. In the second pathway, trait EI influenced academic performance through adaptive coping strategies, namely, active coping, positive reinterpretation, and planning, which also increased academic engagement. Indeed, many authors have argued that the reason trait EI is linked to academic outcomes is because it facilitates the adaptive coping and emotion regulation necessary to face academic stress and achieve academic goals (e.g., Por, Barribal, Fitzpatrick, & Roberts, 2011; Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012). An up-to-date review and discussion of the coping hypothesis is provided in Chapter 4 by Zeidner and Matthews (this volume).

Summary

In summary, the reviewed research indicates that trait EI is reliably linked to better university adjustment, engagement, and retention outcomes, but its association with academic performance in higher education is less clear-cut. Exploring trait EI factors and facets, in addition to the global score, can be valuable in elucidating the role of the construct in academic performance, since, according to the present review, trait EI factors may have differential weights in the prediction of performance and could even cancel each other out. Students in different academic majors have distinct trait EI profiles, and their precise relationship with academic performance may vary across academic subjects and majors. Indirect trait EI effects through other

variables (e.g., learning processes, coping strategies) should also be systematically investigated. For a more extended review of the findings, limitations, and promises of EI research in postsecondary settings, the reader is referred to Chapter 16 by Parker, Taylor, Keefer, and Summerfeldt (this volume).

Reflections on the Relationship Between Trait EI and Academic Performance

While findings for trait EI and adjustment variables are consistent across all educational levels, the literature on the relationship between trait EI and academic performance has yet to reach a consensus (see Tables 3.3 and 3.4; Mavroveli & Sanchez-Ruiz, 2011). There is no doubt that trait EI is implicated in academic performance (e.g., Perera & DiGiacomo, 2013; Petrides et al., 2004); however, the variations across study designs and model operationalizations confound the underlying relationships and produce heterogeneity in results.

Level of Study

Trait EI seems to be a more consistent direct predictor in primary and secondary education than in tertiary education (Perera & DiGiacomo, 2013). This could be due to the collaborative nature of education at the primary level, which requires constant social interactions, in contrast to high school and university, where independent learning gradually becomes more common (e.g., Poropat, 2011). Another possible factor is the restriction of range in cognitive ability due to the admission requirements at universities. Hence, it may be useful to explore the incremental validity of trait EI over and above cognitive ability in order to understand fully its role at different educational stages.

In postsecondary settings, Saklofske et al. (2012) suggested that trait EI might play a differential role by year of study, being more important in the first year of university (e.g., Parker, Summerfeldt, et al., 2004), when students are faced with adjustment and acclimatization challenges. In other words, year of study could be a potential confounding variable in designs with students at different points in their university career. Thus, future studies may wish explicitly to model year of academic study, ideally in the context of longitudinal designs, which would be as welcome in this area as they are in psychology (Collins, 2006) and education (White & Arzi, 2005), more generally.

Indices of Academic Achievement

The specific indicator of academic achievement used in a study (e.g., subject-specific grade or cumulative GPA/semester GPA) can determine the direction and strength of associations with trait EI. At university level, the use of GPA as the unique indicator of academic achievement can be problematic (see Sanchez-Ruiz, El Khoury, Saade, & Shrikadian, [under review](#)). First, GPA is subject to a number of distortions, from grade inflation (e.g., Johnson, 2003) and non-invariance across institutions (Didier, Kreiter, Bury, & Solow, 2006) to confounding influences that can affect performance, like exam anxiety (Karatas, Alci, & Aydin, 2013).

In addition, some tertiary and pre-tertiary educational institutions focus on teaching to test, preparing students for particular assessments and thus limiting their learning experience (Atkinson & Geiser, 2009). In primary school, where there is an absence of rigid performance criteria and teachers are mainly monitoring learning milestones, grading can be more subjective and crude. This starts to change in secondary education with the introduction of a more grade-centered educational system, which, however, is still considered a fallible index of true academic competence (Guskey, 2015). In sum, research should avoid equating GPA with learning, which involves more than final grades, and should be complemented by supplementary approaches, such as formative assessment (Sanchez-Ruiz et al., [under review](#)).

Trait EI Interventions in Educational Settings

It is possible that the optimization of pupils' perceptions of their emotional and social functioning will result in better educational outcomes. Indeed, there has been a growing interest in behavioral interventions aimed at improving child and adolescent trait EI scores, with some evidence pointing to generalized benefits ensuing from improved socioemotional perceptions, such as increased frequency of prosocial behaviors. For example, McIlvain, Miller, Lawhead, Barbosa-Leiker, and Anderson (2015) applied an 8-week yoga-based intervention to a clinical sample of adolescents. This yielded increases in trait EI scores accompanied by improvements in desirable behaviors as rated by staff (e.g., increases in the adolescents' ability to self-regulate). Ruttledge and Petrides (2012) administered a cognitive behavior group intervention to a small number of adolescents exhibiting disruptive behaviors. The intervention, which included six hourly sessions, was successful in reducing teacher-rated disruptive behavior and improving self-perceptions, including trait EI. Trait EI interventions have also been successfully implemented in sports applications (see Chap. 11 by Laborde, Mosley, Ackermann, Mrsic, & Dosseville, this volume).

In terms of systemic prevention efforts, school-based SEL programs, which integrate explicit teaching and practice of social and emotional skills into the school curriculum, have been found to improve students' social-emotional competencies

and related self-perceptions, along with a host of behavioral and academic outcomes (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). The SEL approach is discussed in detail in several other chapters of this book (see Chap. 9 by Espelage et al., this volume; Chap. 7 by Hoffmann, Ivcevic, & Brackett, this volume; Chap. 8 by Humphrey, this volume; Chap. 12 by Elias, Nayman, & Duffell, this volume).

There is robust empirical evidence suggesting that trait EI can be developed in university students (Vesely, Saklofske, & Leschied, 2013; Vesely, Saklofske, & Nordstokke, 2014; see also Chap. 15 by Boyatzis & Cavanagh, this volume; Chap. 14 by Vesely-Maillefer & Saklofske, this volume) and in adults (see Mikolajczak & Pena-Sarrionandia, 2015), with effects that are relatively long-lasting (Kotsou, Nelis, Grégoire, & Mikolajczak, 2011). Specifically, Mikolajczak and her colleagues demonstrated that a well-designed intervention leads to an average increase of 12% in trait EI scores, after a few weeks of training. These effects remained evident for at least a year and were accompanied by improvements in participants' physical and psychological well-being.

Conclusion

We conclude that trait EI has important implications for academic behavior and achievement, although its effects vary across studies. The nature of these effects should not be studied in isolation, but with reference to both verbal and nonverbal cognitive ability, as well as other factors that have been consistently linked to achievement, such as gender, socioeconomic status, and parental education and involvement (Brody, 2000).

While a number of studies have attempted to control for the aforementioned confounding variables, most do not, and there is now a pressing need to disentangle these knotty associations. It is, therefore, recommended that future studies employ longitudinal multivariate designs, using theoretically and empirically robust measurement tools and large sample sizes, allowing for both group-level and subject-specific analyses. In parallel, theoretical focus should expand from the current cognitive- and grade-centered approach to a broader strategy that fosters the development of socioemotional skills and positive self-perceptions among students and teachers alike. Irrespective of how future research develops, the effects of trait EI on scholastic achievement and general school behavior and adaptation, whether direct or indirect, merit careful consideration by those involved in educational policy, planning, and delivery.

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Chapter 4

Grace Under Pressure in Educational Contexts: Emotional Intelligence, Stress, and Coping



Moshe Zeidner and Gerald Matthews

Abstract Proponents of emotional intelligence (EI) often view effective coping with stress as central to the EI construct. In fact, current thinking among EI researchers suggests that the way people identify, understand, regulate, and repair emotions (in self and others) helps determine coping behaviors and consequent adaptive outcomes. The scientific merit of EI plausibly rests on the working assumption that EI is a coherent attribute of the person that supports and contributes to adaptive coping. In this chapter we review what we have learned so far about the role of EI in coping with stress and in supporting adaptive outcomes – with special concern for students in achievement settings. We briefly discuss the role of emotions and emotional competencies in learning contexts. The nature of coping is then described, along with conjectures from the available literature about the likely association between EI and different coping styles. We survey the empirical literature on the role of EI in coping with stress and in affecting outcomes and conclude by presenting a number of concerns regarding attempts to explicate the EI-stress relationship.

Ever since its inception as a scientific construct in the early 1990s (Salovey & Mayer, 1990), emotional intelligence (EI) remains a popular yet controversial concept, having spawned an impressive body of psychological and educational research and practice over the past quarter of a century. Broadly defined, EI refers to a set of hierarchically organized core competencies and skills for identifying, expressing, processing, and regulating emotions – both in self and others (Salovey, Woolery, & Mayer, 2001). There are currently two different conceptual and related measurement models of the EI construct: (a) EI as a cognitive ability, best measured via

M. Zeidner (✉)
University of Haifa, Haifa, Israel
e-mail: zeidner@edu.haifa.ac.il

G. Matthews
University of Central Florida, Orlando, FL, USA
e-mail: gmatthew@ist.ucf.edu

performance-type tests, and (b) EI as a noncognitive trait or personality disposition, best measured via self-report inventories.

The ongoing debate surrounding the practical utility of EI in educational and other applied settings (work, health, family relations, etc.) has made EI a controversial construct in modern psychology. To many enthusiastic supporters, EI is viewed as a quick fix panacea for manifest problems and difficulties in learning settings, including schools and colleges. Furthermore, some rather extravagant claims concerning the practical utility of EI have created considerable excitement about the potential of applications of EI in education. Thus, EI has been touted as a major predictor of educational outcomes and even a stronger predictor than existing measures of ability or personality (e.g., Goleman, 1995). Some of the more extravagant claims about the pivotal role of EI in applied settings have been quite deservedly criticized (Matthews, Zeidner, & Roberts, 2002), leading to a backlash, often overshadowing and even diminishing the tenability of some of the more careful claims made by more sober supporters of EI. For other less sanguine supporters, EI is often little more than old wine packaged in new and more glittering containers.

It is commonly claimed that “heeding the wisdom” provided by the emotional system determines effective coping behaviors and shapes adaptive outcomes in day-to-day life (Goleman, 1995). Theoretical links between EI and coping strategies have been proposed by various researchers. For example, Zeidner, Matthews, and Roberts (2006) suggested that “adaptive coping might be conceptualized as EI in action, supporting mastery of emotions, emotional growth, and both cognitive and emotional differentiation, allowing us to evolve in an ever changing world” (p. 460). Also, Salovey, Bedell, Detweiler, and Mayer (1999) claimed that EI helps individuals cope successfully because they “accurately perceive and appraise their emotional states, know how and when to express their feelings, and can effectively regulate their mood states” (p. 161). Furthermore, it has been suggested that the scientific merit of EI plausibly rests on the working assumption that EI is a coherent attribute of the person that supports and contributes to adaptive coping (Matthews et al., 2002).

This chapter reviews what we have learned so far about the role of EI in coping with stress and in supporting adaptive outcomes, with special concern for students in various educational settings. We begin our review by briefly discussing the role of emotions and emotional competencies in learning contexts for student well-being and academic success. The nature of coping is then described, along with conjectures from the available literature about the likely association between EI and different coping styles. We move on to discuss academic stressors and how individuals typically cope with stress. Next, we survey the empirical literature on the role of EI in coping with stress and conclude by presenting a number of concerns regarding attempts to explicate the EI-coping with stress relationship.

The Role of Emotions and Emotional Competencies in Academic Settings

We now briefly survey the pivotal roles of emotions and emotional competencies in academic settings.

Emotions

Emotional processes, it seems, saturate daily life at school and in academia. A student's mood may swing from moments of interest, confidence, contentment, pride, flow, gratitude, and joy to moments of boredom, insecurity, discontent, anger, fear, shame, envy, blame, and sadness (Pekrun & Frese, 1992). However, until recently, the importance of emotions at school has been largely ignored by both researchers and practitioners alike, with emotions largely given short shrift in school-based theory, research, and applications. In both Greek philosophical and traditional Judeo-Christian thought, emotions were perceived as being chaotic and irrational and therefore antagonistic to rational thought. Cognitive, motivational, and performance factors came to be viewed as more urgent for school life and success than emotions, with the latter glossed over, discouraged, and eventually relegated to a relatively minor role in educational research and practice.

Fortunately for emotion research, the *zeitgeist* at the turn of the millennium and the current trend of emphasizing “noncognitive twenty-first-century skills” (see Kyllonen, *in press*) has offered an alternative view on the interface of reason and emotions. According to this “new look” in education, to be educated means not only to be cognitively intelligent, knowledgeable, and well versed in the sciences, humanities, and the arts but also to be emotionally aware of oneself and others, kind, empathetic, compassionate, caring, considerate, responsible, trustworthy, conscientious, honest, pro-social, and in control – emotionally intelligent, in short (Elias, Hunter, & Kress, 2001: see also Chap. 12 by Elias, Nayman, & Duffell, this volume). This “new look” requires that the traditional focus on cognitive abilities be supplemented by a strong concern with social and emotional training and development. Thus, over the past few years, more and more psychologists and researchers have come to realize that emotions are really a central part of school life and crucial for students' functioning and success. It is of note that the spiraling research on EI over the past 25 years or so has inadvertently served as a “soup stone” (Navon, 1984) and major catalyst driving the resurgent interest in emotions in schools and its emergence as a flourishing area of research. (For updated reviews of a wide array of emotions in education, see the chapters in the 2014 *International Handbook of Emotions in Education*, edited by Pekrun and Linnenbrink-Garcia.)

Emotions and school life are best construed as being mutually determined. On the one hand, emotions are among the primary determinants of day-to-day interactions and learning in the school setting, plausibly impacting upon students'

individual achievement and social well-being. On the other hand, given that school is a sphere of life that is of key importance for most students' future occupational career, income, self-esteem, and social status in modern society, a student's academic success is among the primary determinants of emotional life and well-being. Furthermore, students' affective development and health may influence success or failure at school, through the mediation of emotions.

Given that both achievement-related and social emotions in achievement settings may be construed as "on-line" indicators of how well a student is coping with demands, pressures, and affordances, it is readily apparent that emotions may be useful sources of information, with the potential to help students interpret and navigate their academic and social environment. Accordingly, students' emotions and feelings in achievement settings reflect spontaneous emotional responses to the appraisals and interpretations they make of ongoing events involving challenges, threats, and losses, in the classroom or lecture hall. When students believe they are successfully coping with academic or social demands, challenges, and affordances, they tend to feel good about themselves; when they feel they are not successfully coping with ongoing academic or social demands and challenges, they tend to feel bad. Thus, if students can work backward from their experienced emotions, they may be capable of accessing rich information about their appraisals of events and relational meanings that they share inside the learning setting. This may often alter their thinking and actions in such a way as to allow them to negotiate achievement-related or social challenges and threats in a more adaptive manner.

The diverse emotions experienced by students in achievement situations are slippery and difficult to classify. Depending on the perspective adopted, the same emotion can be viewed as positive or negative. One tentative typology of emotions in school settings (Pekrun & Frese, 1992) attempts to specify the universe of learning-relevant emotions based on two major dimensions: *valence* (positive vs. negative) and *focus* (task vs. social). These two dimensions reasonably cross-partition the domain of emotions into four discrete categories:

1. Positive task-related emotions (e.g., interest, engagement, flow, happiness, joy, relief, pride)
2. Negative task-related emotions (e.g., boredom, anxiety, guilt, anger, sadness)
3. Positive social emotions (e.g., empathy, gratitude, admiration, compassion)
4. Negative social emotions (e.g., callousness, envy, jealousy, contempt, embarrassment)

Social and Emotional Competencies

Much of the interest surrounding EI in educational settings is based on the working assumption that emotional competencies are conducive to student learning and well-being and can play a major role in making the school a more productive as well as enjoyable place. Thus, a number of commentators have proposed that the

acquisition of social and emotional skills is a prerequisite for students before they can benefit from the traditional academic material presented in the classroom (Zins, Payton, Weissberg, & O'Brien, 2007). Indeed, in order to succeed academically, students in modern society need a broad arsenal of emotional and social skills, including motivational energy to work hard and persist toward effectively achieving academic goals; adaptability and grit in the face of academic and social obstacles and setbacks; communication skills necessary to work with teachers and classmates and participate in cooperative learning groups; and emotion regulation to maintain a positive and energetic mood in the classroom or college library or lab and to contain negative emotions that may disrupt concentration and learning. EI may serve to enhance student academic success, as well as indirectly mediate success by enhancing motivation and self-control, facilitating constructive learning partnerships, minimizing damaging antisocial behaviors, and protecting students from barriers to learning, such as mental distress, substance abuse, delinquency, teen pregnancy, and violence (Hawkins, Smith, & Catalano, 2004).

Proponents of the EI construct have claimed that emotional competencies are systematically related to individual differences in coping with stress at school, which, in turn, should confer generally more or less successful educational outcomes on the individual (cf. Salovey, Bedell, Detweiler, & Mayer, 1999; Zeidner, Matthews, & Roberts, 2009). High EI individuals might be more capable at using both positively toned and negatively toned emotions to their advantage to improve performance. Thus, positive emotions, such as enthusiasm and pride, could broaden students' cognitive-attentional span, encourage creative thought, and stimulate students to complete their work assignments with enthusiasm or contribute more of their time to school-related tasks (Fredrickson & Branigan, 2005). Conversely, negative emotions such as fear, envy, and sadness, which could adversely impact on students' ability and motivation to focus on their school tasks (Zeidner, 1998), are effectively regulated by high EI students. Furthermore, high EI students should be more adept at regulating both their own and others' emotions to foster positive interactions with their classmates, which results in positive classroom and school climate and better academic performance.

Stress and Coping in the Academic Environment

Stressful events impinging on students in various academic contexts – running the gamut from academic hassles (e.g., tests, complex homework assignments, oral presentations) to traumatic events (e.g., school shootings, terror attacks, natural catastrophes) – are environmental demands, pressures, or constraints, which challenge one's coping capabilities. Students in modern schools and institutes of higher education are required to negotiate a wide array of environmental demands and challenges in academic settings (e.g., assimilating demanding course content, meeting deadlines for assignments, taking challenging exams and surprise quizzes, making ends meet financially, fostering satisfactory social relations, etc.) that tax,

challenge, or exceed students' coping resources. The degree of stress evoked by these academic stressors depends on a host of factors, including the objective properties of the academic environment (standards of excellence, difficulty of study material, etc.), the students' perception of the academic environment (perceived competitiveness, perceived social support from teachers, staff, etc.), perceived coping resources of the student (cognitive, social, emotional, physical, spiritual), students' available arsenal of coping strategies for transacting with environmental stressors, and the specific cultural lens through which the environmental demands are experienced.

From a transactional perspective (see Lazarus & Folkman, 1984), the complex and dynamic interaction between school and social conditions and a student's personal resources (coping skills, dispositions, values, commitments, and beliefs) constitutes a "call for action," resulting in a meaningful change (disruption or enhancement) of the student's personal condition, such that the student is forced to deviate from normal functioning. Although stress per se is an important factor to consider in judging adaptive outcomes, what may really matter is how the student copes with the stress at hand, an issue we next address.

It seems that whenever a student is hard-pressed to deal with some academic impediment, obstacle, looming threat, or anticipated harm, the experience may be viewed as being stressful. Accordingly, coping with stress in the classroom or academic setting would involve the student's efforts to reduce, remove, or manage the demands of the student-academic environment transaction that is appraised as stressful (e.g., Lazarus & Folkman, 1984; Lazarus, 1991). These constantly changing efforts can be cognitive or behavioral, direct and indirect. Accordingly, when the demands of a particular evaluative academic situation (e.g., taking an important test) are perceived as stressful, efforts are directed at dealing with the problem at hand (planning a step-by-step program of study, monitoring study progress, etc.) and/or regulating emotional stress (ventilating tension, blaming oneself for procrastinating study behaviors, etc.), in order to manage the troubled person-academic environment transaction (see Lazarus, 1991).

Although a wide array of taxonomies of coping strategies are currently available, researchers have typically converged on the following three coping categories:

- (a) *Problem-focused coping*, where the person solves the problem by neutralizing or removing the source of stress (e.g., carefully planning for a major exam)
- (b) *Emotion-focused coping*, where the person regulates, reduces, channels, or eliminates aversive emotions associated with the stressful encounter (e.g., seeking emotional support from friends after performing miserably on a math quiz)
- (c) *Avoidance coping*, where the individual employs strategies that are designed to circumvent or avoid the stressful situation (e.g., watching TV, thumbing through the swimsuit shots of top models in *Sports Illustrated*, walking the dog)

For sure, coping is a complex construct, and it is possible to list more ways of coping than we have described here. Skinner and Zimmer-Gembeck (2007) listed as many as 12 "families" of coping, but the focus of the present section is on the aforementioned three broad categories.

Coping processes are of pivotal importance in that they may affect adaptive outcomes, for better or worse. Thus, effective coping will help a student adapt to a stressful academic situation by eliminating or modifying the conditions that produce anxiety or by keeping the emotional consequences within manageable bounds. When misplaced, counterproductive coping attempts may make the situation worse and eventually lead to elevated anxiety and even aggravate the external problem. Students will typically develop a repertoire of coping strategies for dealing with the difficulties that arise in relationships at school and in academic difficulties.

Most students attain reasonable competence in coping with stress and anxiety through learning (modeling behavior of significant others, direct instruction, reinforcements) and experience (identifying what works for the individual, positive or negative consequences of coping behaviors). Coping may also affect outcomes through its impact on the frequency, intensity, duration, and patterning of physiological stress reactions and the resultant affective and somatic outcomes. Often, coping strategies may impede – rather than promote – health-related behaviors. For example, a student's health may be negatively affected when coping involves risk-taking (e.g., excessive smoking or drinking, substance abuse, gambling, or high-speed car racing).

Coping Strategies: What Works?

Unfortunately, the simple question of what works has no simple answer (Zeidner & Saklofske, 1996). In fact, process-based models of stress emphasize that coping processes are not inherently adaptive or maladaptive; the impact of a given coping strategy on well-being depends on the specific context in which it occurs (Folkman & Moskowitz, 2004). Furthermore, a coping response might be judged successful relative to one outcome criterion (e.g., hours spent studying for an exam) but not another (getting an adequate amount of sleep). Indeed, the resolution of one coping task might even come at the expense of another (e.g., working long hours to complete a PhD thesis might contribute to problems at work or a marriage breakdown).

It is now readily apparent that coping effectiveness must be examined in the social context in which problems occur. Furthermore, preferred coping methods and perceived effectiveness must be appraised relative to a social or cultural group's values, norms, worldview, symbols, and orientation (for a discussion of the role of culture, see Chap. 5 by Huynh, Oakes, & Grossmann, this volume). Consider the case of a female student who devotes herself to her partner, children, or ailing parents at the expense of personal achievement goals at her academic studies. The evaluation of this coping approach is not merely a scientific matter but also a moral one and may differ in traditional versus achievement-oriented societies. Thus, any statement about coping effectiveness is, at best, a broad generalization.

With these cautions in mind, there are a number of specific coping techniques that have been typically judged by researchers as adaptive, others that have been judged as maladaptive, whereas other techniques present dilemmas to researchers.

Thus, empirical studies suggest that, broadly, coping through problem-focus or active engagement improves outcomes, whereas avoidance, disengagement, and certain forms of emotion-focus are harmful to mental health (for a review see Carver & Connor-Smith, 2010). An adaptive response to remediable situations still requires problem-focused activities in order to effectively remove or ameliorate the threat. In fact, problem-focused coping is preferred by most people and is highly effective in stress reduction, providing a sense of mastery over the problem (Zeidner & Saklofske, 1996). However, as noted, coping effectiveness is both context-specific and related to the specific encounter (Folkman & Moskowitz, 2004), meaning that what works in one situation may not work in another. Emotion-focused coping, which may help in maintaining emotional balance by effectively channeling and venting negative emotions or building up positive emotions, may in fact be the strategy of choice when the source of stress is unclear, little can be done to eliminate the stressor, or there is a lack of knowledge about how to modify the stressor (Lazarus, 1999). A third category introduced in the literature (Parker & Endler, 1996) – avoidant coping – reflects negative responses to stressors such as denial, substance use, and mental disengagement. This form of coping is unlikely to lead to beneficial outcomes in any situation.

EI and the Developmental Process

Individual Differences in Emotional Development

The transactional model of stress emphasizes that coping is a process that unfolds over time, as the person strives to identify the optimal means for dealing with pressures that may themselves be changing (Lazarus, 1999). Education involves dynamic factors that are sometimes overlooked in studies of EI (Matthews, Zeidner, & Roberts, 2006). There are both external and internal sources of temporal change. Education itself is organized to provide a graduated series of challenges (e.g., as the child moves from elementary school to middle school or from high school to university). Cycles of instruction culminating in formal testing also produce well-defined sequences of threatening events. As the child ages, there are also less well-structured changes, such as increasing expectations from parents and teachers, new friendships with peers, and the opportunities afforded by increasing autonomy.

At an internal level, the child's capacity for emotion regulation and coping becomes more sophisticated and elaborated over time. The child develops increasing levels of emotional skills from infancy to adolescence (Denham, 1998). Six developing skills that seem critical for EI are listed by Saarni (2008): awareness of one's emotional state, understanding of the emotions of others, use of an emotion lexicon, capacity for empathy and sympathy, management of emotional expressiveness, and effective emotion regulation and adaptive coping.

Thus, the child's capacity for effective coping reflects the developmental process. Preschoolers' emotional functioning may be limited by lack of an effective vocabulary for representing their own and others' emotions (Eisenberg,

Sadovsky, & Spinrad, 2005; Izard et al., 2001). Likewise, the immature brain may lack the capacity for effective top-down regulation of emotion, such as suppressing outbursts of anger (Rothbart, Sheese, & Conradt, 2009). School-age children acquire the regulatory skills of adults, but it takes time to build up the repertoire of contextualized skills necessary to apply coping flexibly, matching the strategy to the external challenge appropriately. Skinner and Zimmer-Gembeck (2007) reviewed the developmental literature on coping. They concluded that preschool children tend to cope through direct action, including seeking help from others, whereas older children are additionally able to employ more cognitive methods, such as constructive problem-solving and self-distraction. Coping also becomes more embedded in social processes as the child learns to work with others in managing threats. With adolescence comes the capacity for metacognitive coping, as the child builds a self-schema that can be used to predict future emotional response to imagined situations.

It follows that emotionally intelligent coping reflects what is age-appropriate for the child, and models of adult EI may not be well-suited to understanding individual differences in coping in younger children. Zeidner, Matthews, Roberts, and MacCann (2003) proposed a multilevel investment model that aimed to specify the changing constraints on emotionally intelligent coping during the developmental process. In infancy, individual differences in emotion regulation reflect brain-based temperamental factors, such as positive and negative emotionality, which may influence the quality of social interaction between child and caregiver. In children of preschool and elementary school age, language-based regulation of emotion becomes increasingly important. Increasing verbal capabilities allow the child to acquire rules for understanding and expressing emotion, such as “big boys don’t cry,” and for communicating emotion to others. Izard et al.’s (2001) work on emotion knowledge shows that in younger children, verbal ability is quite strongly associated with accuracy of identifying emotion. Relationships may be reciprocal in that social-emotional competence may contribute to acquiring preliteracy skills, such as alphabet knowledge (Curby, Brown, Bassett, & Denham, 2015).

Linguistic abilities are also critical for the major categories of coping. Developing a plan for handling a demanding situation (problem-focus) requires a verbal representation, as does reflection on one’s thoughts and feelings (emotion-focus). Increased language skill can be a double-edged sword to the extent that it also enables maladaptive coping strategies, such as rumination (Michl, McLaughlin, Shepherd, & Nolen-Hoeksema, 2013). In the classroom, worry occupies space on verbal working memory that may hinder effective academic performance (Zeidner & Matthews, 2005). The transition from late childhood to early adolescence (about ages 10 to 12) is marked by increasing self-insight (Saarni, 2008). For example, as the child comes to understand how emotions may affect thinking, he/she may realize that it is best not to get upset during a difficult test. Coping thus takes on a more metacognitive element; for example, choice of strategy may be influenced by emotional forecasting (e.g., Hoerger, Quirk, Chapman, & Duberstein, 2012) of the predicted outcome of coping. Level of metacognitive skill may limit the effectiveness of coping, and maladaptive metacognitions such as beliefs that worrying is beneficial may perpetuate stress (Wells & Matthews, 2015).

Methodological Issues

The majority of studies of EI and coping are based on cross-sectional analyses of one-time assessments of general coping preferences. However, the developmental perspective suggests several limitations to this popular approach, discussed next.

Neglect of process factors Coping can be studied over different time spans. General coping styles have some temporal stability, and so it is legitimate to assess EI-coping associations on a cross-sectional basis. However, this approach fails to inform about the dynamic relationships between EI and coping that we would expect to see on theoretical grounds. On the one hand, we would expect that high EI would predict future acquisition of coping skills as cognitive and metacognitive abilities develop. On the other hand, outcomes of coping may feed back into change in EI. For example, the adolescent who copes by taking drugs in the company of delinquent peers may acquire maladaptive social and emotional skills that over time impact EI adversely. A few studies of adolescents have investigated associations between EI and outcome measures such as emotional maladjustment prospectively (e.g., Frederickson, Petrides, & Simmonds, 2012; Salguero, Palomera, & Fernandez-Berrocal, 2012), but evidence on the coping process is lacking.

Neglect of context The transactional model of stress emphasizes that coping is context-bound and a single individual may cope differently with different types of events or the same event on different occasions. General coping scales fail to capture this variation, and there are concerns over how well coping scales actually predict coping behaviors (Stone et al., 1998). Children in the education system face quite different challenges associated with academics, peer relations, and interacting with teachers and may show considerable variation in coping strategies. Studies have rarely attempted to differentiate such contexts, although some researchers are now conducting more focused studies that address specific sources of stress (e.g., Parker et al., 2006).

Neglect of the social environment Standard models of EI tend to view the person as an atomized individual who copes, successfully or otherwise, in isolation. However, successful adaptation to the challenges of adolescence may depend as much on the child's functioning within social networks as well as on individual choice of coping strategy (Zeidner, Matthews, & Olenik Shemesh, 2016). For example, being on a high school sports team may confer social advantages that ease coping irrespective of the characteristics of the individual student. An extreme example from US higher education is cases of student athletes being set easy or even phantom assignments to ensure they would receive high enough grades to remain in school (Ridpath, Gurney, & Snyder, 2015). In these cases, overvaluing of athletics led to coping with academic pressures being removed from the student and diverted to the illicit institutional support system. Conversely, schools may legitimately offer academic support to disadvantaged students, but student coping needs to be understood within that institutional framework.

Neglect of confounds of EI The investment model of EI (Zeidner et al., 2003) emphasizes that development of EI is intertwined with development of standard personality and ability dimensions. Cross-sectional studies show strong correlations between trait EI measures and standard personality measures such as the Big Five (Zeidner & Matthews, 2012), as well as lesser but still substantial associations between ability EI and general cognitive ability (Mayer et al., 2012). These associations make sense developmentally in that both temperamental factors and verbal ability may constrain development of EI (Zeidner et al., 2003). However, they are a problem in that it may be these confounds that account for stress and coping correlates of EI, especially in the case of trait EI which is substantially negatively correlated with neuroticism (Zeidner & Matthews, 2012; Webb et al., 2013). Neuroticism is associated with stress outcomes via multiple pathways including sensitivity of brain punishment systems, biases in appraisal, and maladaptive emotion-regulation and coping pathways (Matthews, Deary, & Whiteman, 2009). Unless effects of trait EI are deconfounded from those of low neuroticism, it may be difficult to interpret stress correlates of EI. A more egregious form of confounding is the tendency of trait EI scales to include items that directly assess stress outcomes such as well-being. Controlling for criterion contamination of this kind may substantially lower the predictive validity of trait EI in the stress domain (Matthews, Zeidner, & Roberts, *in press*). A partial solution to these issues is to employ multifaceted EI scales that distill those components of the construct that are less contaminated with general personality variance (Matthews et al., *in press*).

The existing research on EI, stress and coping, and well-being outcomes that we will review next should be evaluated in light of these limitations. It is recommended that future studies investigate the role of EI at a finer level of granularity in relation to the time course of specific challenging events in the educational setting.

Unraveling the EI-Coping-Outcome Nexus: Empirical Data

Some of the newer models and definitions of coping (e.g., Folkman & Moskowitz, 2004; Skinner & Zimmer-Gembeck, 2007) draw upon emotion research, closely linking the constructs of EI and coping. Conceptually, EI should indeed effectively mobilize coping processes to promote adaptation, plausibly operating as a personal resource in determining choice and implementation of an appropriate coping style, which, in turn, affects adaptive outcomes. Emotionally intelligent students, who are skilled at expressing, understanding, and managing their emotions, should be better capable of adaptively coping with the stressors and hassles of academic life than their low EI counterparts, subject to the caveats noted in the previous section. In fact, EI may be part of one's affective arsenal and "bag-of-tricks" to manage emotion-laden encounters and coping with stressful experiences in the classroom.

EI can help individuals to deal with (or in certain instances, avoid) stress via a number of pathways (Zeidner, Matthews, & Roberts, 2006; Zeidner, Matthews, & Roberts, 2009). These methods include (a) anticipation and avoidance of stressful

encounters, (b) more constructive perceptions and situational appraisals, (c) adaptive management and repairing of emotions, (d) richer coping resources, and (e) use of effective and flexible coping strategies. Coping features prominently in almost all of these explanations. Some of the conjectured mediating mechanisms (e.g., adaptive regulation) refer directly to coping with emotion. Other mechanisms, such as managing exposure to stressors, are more likely to influence emotion indirectly, depending on the outcome of the encounter.

Research devoted to uncovering relations between EI, effective coping strategies, and adaptive outcomes has generally touched on two related issues. The first and simpler issue has involved determining how EI measures correlate with established coping measures, including, for example, dispositional or situational coping strategies. A more subtle issue involves ascertaining whether coping mediates (EI → coping → adaptive outcomes) or moderates (EI × coping → adaptive outcomes) associations between EI and adaptive outcomes. The data pertaining to these two issues is reviewed in the following subsections.

Relations between EI and Coping Strategies

Zeidner et al. (2006) summarized much of the research linking EI and coping strategies, noting that correlations among these constructs range between 0.20 and 0.60. Furthermore, the strength and direction of the relationships vary according to the ways in which EI is operationalized (trait EI vs. ability EI), as well as the type of coping strategy measured (problem-focused, emotion-focused, or avoidant). Zeidner et al. (2006) concluded that trait EI shows a consistent positive relationship to problem-focused coping and a consistent negative association with emotion-focused coping.

Evidence with adult samples A recent meta-analysis (Peña-Sarrionandia, Mikolajczak, & Gross, 2015) reports effect sizes for a range of associations between trait EI and emotion-regulation strategies, including coping, in adult samples. Effect sizes are reported as Cohen's *ds* rather than as correlation coefficients. For reference, *ds* of 0.2, 0.5, and 0.8 are considered small, medium, and large effect sizes, respectively (Cohen, 1988). We will summarize here effect sizes that were based on at least five observations. The meta-analysis confirmed positive associations between trait EI and several strategies that are considered generally adaptive, including problem-solving ($d = 0.92$), constructive conflict resolution ($d = 0.58$), and seeking social support ($d = 0.28$). Trait EI was also positively associated with reappraisal ($d = 0.61$), representing a constructive emotion-focused strategy, but negatively correlated with potentially harmful forms of emotion-focus including rumination ($d = -0.43$) and suppression ($d = -0.43$). Strategies linked to avoidance tended to show modest negative associations, including avoidance itself ($d = -0.27$) and substance use ($d = -0.25$), although trait EI was positively related to distraction ($d = 0.26$).

A similar pattern of associations has been found in laboratory experiments, where high trait EI was associated with greater use of proactive coping strategies (e.g., concentrating on the task, seeking help) rather than passive or avoidance strategies (e.g., giving up, distancing, rumination) when performing stressful laboratory tasks (Matthews et al., 2015; O'Connor, Nguyen, & Anglim, 2017; Salovey et al., 2002). Overall, however, trait EI appears to be a more robust predictor of general coping styles than measures of actual coping in a specific context (Zeidner & Matthews, 2012). These relationships may be due, in part, to common method construct variance, due to the strong resemblance between trait-based EI measures and personality-type measures of coping styles. The associations are as would be expected from the known personality correlates of coping (Carver & Connor-Smith, 2010), although trait EI has some incremental validity in predicting coping with the Big Five controlled (Petrides, Pérez-González, & Furnham, 2007). Research using more narrowly focused mood-regulation questionnaires, such as the Trait Meta-Mood Scale (TMSS; Salovey et al., 1995), appear promising, especially as these measures may be less confounded with personality than are many EI questionnaires (Gohm & Clore, 2002), and they show evidence for meaningful psychophysiological correlates (Salovey et al., 2002). For example, a prospective study of adolescents showed that the TMSS predicted well-being with initial level of adjustment controlled (Salguero et al., 2012), although the role of coping was not investigated.

The findings are less clear where ability EI is concerned, largely because there are so few studies. Peña-Sarrionandia et al. (2015) reported meta-analytic findings for ability EI, but the only one based on more than three observations was a small negative association with substance use ($d = -0.27$). Studies using the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Caruso, & Salovey, 2002), for which there is accumulating evidence on reliability, internal factor structure, and validity (Mayer, Salovey, & Caruso, 2012; Mayer, Salovey, Caruso, & Sitarenios, 2003), have produced mixed outcomes. Table 4.1 displays seven relevant studies of the MSCEIT in relation to strategies used in coping with stress, mainly by students. Although findings are varied, likely reflecting the heterogeneity of samples and coping measures, there is a trend toward the MSCEIT predicting higher task-focus (primarily for Managing Emotions branch) and lower emotion-focus and avoidance. In conventional terms (e.g., Carver & Connor-Smith, 2010), this is an adaptive pattern, expected to promote well-being. However, a further study (Burns, Bastian, & Nettelbeck, 2007) presented regression statistics only; no significant association between the MSCEIT and a composite of coping measures was found.

Evidence with youth samples Evidence on the associations between EI and coping in the juvenile populations of most interest to educational psychologists is rather lacking, but associations appear to be similar to those found in adults. At least in older children and adolescents, similar classificatory schemes for coping can be applied (Compas et al., 2014). Studies of adolescents suggest that trait EI is positively associated with problem-focus and seeking social support, but negatively related to maladaptive forms of emotion-focus (Downey, Johnston, Hansen, Birney, & Stough, 2010; Mavroveli, Petrides, Rieffe, & Bakker, 2007). The largest such

Table 4.1 A summary of studies of the MSCEIT and coping

Study	Sample	Coping scale	Task-focus	Emotion-focus	Avoidance/disengagement
<i>Adult samples:</i>					
Curci et al. (2013)	125 college students	COPE	0.15	-0.13 (venting) -0.02 (SSS-emotional) 0.03 (SSS-instrumental)	-0.20* (denial) -0.11 (behavioral) -0.14 (substance use)
Gohm, Corser, and Dalsky (2005)	159 freshmen	COPE	0.04	0.10 (venting) 0.16 (SSS-emotional) 0.14 (SSS-instrumental)	-0.10 (mental) -0.29** (denial) -0.23** (behavioral)
Goldenberg, Matheson, and Mantler (2006)	223 community adults	COPE	0.17*	0.04	-
Matthews et al. (2006)	200 college students	CITS	0.04	-0.19**	-0.16*
MacCann et al. (2011) ^a	159 college students	CWSS	0.22**	-0.32**	-0.26**
MacCann et al. (2016) ^a	427 college students	CWSS	0.20**	-0.11*	-0.15*
Zeidner et al. (2013) ^a	89 mental health practitioners	CISS	0.25*	0.00	0.09
	93 medical practitioners	CISS	0.26**	-0.28**	-0.14
<i>Youth samples:</i>					
Davis and Humphrey (2012)	772 adolescents	CCSC-R1	0.12**	-	0.03
Davis and Humphrey (2014)	1159 adolescents	CCSC-R1	0.10**	-	0.01
Peters, Kranzler, and Rossen (2009)	50 children and youths	CISS	0.14	-0.46**	0.11
Zeidner et al. (2016)	203 adolescents	COPE	0.06	-0.10	-0.09

Note. * $p < 0.05$, ** $p < 0.01$

CCSC Children's Coping Strategies Checklist, CISS Coping Inventory for Stressful Situations, CITS Coping Inventory for Task Stress; COPE Coping Orientation to Problems Experienced; CWSS Coping with School Situations, SSS Seeking Social Support.

^aCorrelations with the MSCEIT Managing Emotions branch; no total score data reported.

study (Davis & Humphrey, 2014; $N = 1159$) reported that trait EI correlated positively with active coping ($r = 0.23$) and support seeking ($r = 0.17$) and negatively with avoidance coping ($r = -0.09$). Effect sizes are smaller here than is typical in studies of adults. Chan (2005), in a Chinese adolescent sample, found that negative associations between facets of trait EI and distress were mediated by more use of social interaction coping and less use of avoidance.

The MSCEIT studies cited in Table 4.1 (Davis & Humphrey, 2012, 2014; Peters et al., 2009) provide rather inconsistent findings, although there appears to be a trend toward a weak association with active problem-focused coping. Zeidner et al. (2016) found that higher MSCEIT scores were associated with several facets of social support, but not with major coping dimensions or with well-being, in an Israeli adolescent sample. Davis and Humphrey (2012, 2014) suggested that trait and ability EI may operate rather differently in adolescents. They proposed that ability EI influenced selection of coping strategy, whereas trait EI affected quality of implementation. However, this argument conflicts with the typical linkage of ability EI to maximal performance and trait EI to typical performance.

In sum, there are documented links between EI and various means of coping with stressful situations, with these links being stronger when trait-based EI measures are employed than ability-based EI measures.

Linking EI, Coping, and Outcomes

Mediating effects on academic and adjustment outcomes The relationship between EI and coping is worth pursuing further for its possible implications for student academic outcomes. The most direct evidence comes from three studies reported by MacCann and colleagues (MacCann, Fogarty, Zeidner, & Roberts, 2011; MacCann, Lievens, Libbrecht, & Roberts, 2016). In several samples of community college and secondary school students, the emotion management branch of the MSCEIT predicted grades, and the association was mediated by task-focused coping. Prospective data collected in a five-year study of British adolescents (Qualter et al., 2012) showed that ability EI moderated the impact of cognitive ability on exam performance, although the nature of the effect differed for boys and girls. Qualter et al. (2012) hypothesized that boys low on cognitive ability benefited especially from high ability EI in managing negative emotions and remaining engaged with the education process.

Trait EI, too, may be important for academic engagement and attainment, as shown by its role in student retention during the transition from high school to university (Parker et al., 2006; see also Chap. 16 by Parker, Taylor, Keefer, & Summerfeldt, this volume; Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). Higher levels of task-focused coping associated with trait EI have also been found to predict prospectively less end-of-year pre-exam stress (Austin, Saklofske, & Mastoras, 2010) and higher academic grades in the

university setting (Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012), although it might also be that academic success encourages future task-focused coping. In another prospective study of freshmen university students, Perera and DiGiacomo (2015) showed that students' trait EI assessed at the start of the term was positively associated with active (task-focus) coping assessed 1 month later, which in turn mediated the indirect links between trait EI and midterm academic engagement as well as end-of-term grades. These mediated pathways remained robust even after controlling for basic personality, supporting the idea that trait EI contributes to academic attainment through its links with proactive coping.

In addition to the mediational evidence for academic outcomes, a number of studies have shown significant mediating effects of coping on socioemotional adjustment outcomes. For example, Zeidner, Kloda, and Matthews (2013) reported a significant indirect effect for dyadic coping in the EI-marital quality relationship among newlyweds – for both self-report and ability-based measures of EI. The authors conclude that their data support the notion that individuals who perceive they can identify, apply, understand, and regulate their emotions also report stronger dyadic coping, which, in turn, impacts on marital outcomes. Comparably, research by Zeidner, Hadar, Matthews, and Roberts (2013) among Israeli health practitioners found a significant mediating effect of problem-focused coping in the ability EI-compassion fatigue relationship. Also, Davis and Humphrey (2012) reported that active coping mediated a negative association between ability EI and depression in adolescents.

Moderating effects on stress response A small number of studies also suggest that EI may have *moderator* effects, for example, by dampening the deleterious effects of stress on emotional and physiological outcomes. Keefer, Parker, and Saklofske (2009) reviewed mood induction experiments addressing the role of trait EI in handling or recovering from procedures designed to induce stress in the lab (e.g., through reading passages, writing stories, viewing short video clips). In these experiments, participants' mood ratings (and sometimes physiological responses) were measured before and immediately after the mood induction procedure, as well as at the end of a brief recovery period, to see if participants high and low in trait EI differed in how easily they got upset by the stressor and how long it took them to recover afterward. The results of these experiments are rather complex. Whereas high trait EI individuals did come to the lab in a better mood than their low trait EI counterparts, high trait EI did not necessarily lessen the impact of mood manipulation procedures on mood valence or intensity. Yet, despite the variability in mood reactivity, higher trait EI predicted more rapid recovery from lab-induced distress, healthier physiological response to stress, and greater mood improvement over time. The emotion management component of trait EI emerged as the strongest moderator in the relationship between stress and mood recovery outcomes. This moderating effect of trait EI on the impacts of stressful encounters has been reported at the neuroendocrine level as well, with students high in trait EI secreting less glucocorticoids (free flow of cortisol) when being tested than their low trait EI counterparts (Mikolajczak, Roy, Luminet, Fillée, & de Timary, 2007).

However, the results from naturalistic, non-experimental studies are mixed. For example, Armstrong, Galligan, and Critchley (2011) found that the relationship between negative life events and level of distress was indeed weaker for individuals high in trait EI, supporting its protective role against life stress, whereas Day, Therrien, and Carroll (2005) failed to find significant moderating effects of trait EI on the relationship between daily hassles and symptoms of psychological strain.

As for ability EI, experimental studies of stress manipulations have shown that the MSCEIT predicts both subjective and objective stress criteria (Matthews et al., 2006; Schneider, Lyons, & Khazon, 2013). For example, Matthews et al. (2006) tested whether ability EI predicted coping with task stressors in the lab among college students, using the MSCEIT as the measure of ability EI. Three elements of stress response – task engagement, distress, and worry – were measured using the Dundee Stress State Questionnaire (Matthews et al., 2002). Ability EI was associated modestly with lower distress and worry, and with reduced use of emotion-focus and avoidance coping, strategies likely to be maladaptive in the performance context. With the Big Five controlled, ability EI related only to less worry and avoidance coping, providing some support for the MSCEIT as a predictor of stress processes. However, ability EI was not specifically related to changes in stress state in this study. In contrast, Schneider et al. (2013) found that ability EI did predict better mood outcomes and more resilient physiological responses to task-induced stress.

EI and Coping Resources

Coping has been typically described in terms of stable preferences for classes of strategies such as problem-focus (while acknowledging the importance of situational influences). A coping resource perspective focuses instead on the personal qualities and social connections that may facilitate coping of all kinds (Holahan, Moos, & Schaefer, 1996). For example, a sense of mastery and optimism may support persistence in coping to overcome adversity and setbacks as the stressful episode unfolds (Taylor & Stanton, 2007). Beneficial effects of coping resources may in part be mediated by choice of coping strategy (Taylor & Stanton, 2007), but resources are conceptually distinct from coping style.

Although there is little empirical research on EI and coping resources, EI itself is often construed as a coping resource. Indeed, the notion of EI as a broad-based characteristic that integrates a variety of positive characteristics suggests that the emotionally intelligent may be able to draw upon a variety of personal and social resources in handling the challenges of life. Relevant qualities include more positive appraisals of personal competence in handling potentially stressful encounters and optimistic outcome expectations (Matthews, Zeidner, & Roberts, 2002), as well as more constructive thought patterns (Epstein, 1998). Mikolajczak and Luminet (2008) provided experimental data in support of the claim that trait EI moderates the appraisals of a stressful encounter on self-efficacy. More specifically, whereas no

differences among high and low trait EI students were found in neutral conditions, under stressful conditions involving solving math problems under ego-orienting and speeded conditions, students higher on trait EI appraised the condition as more challenging and less threatening than their low trait EI counterparts. High trait EI students also exhibited greater self-efficacy to cope with a stressful situation than their low trait EI counterparts.

Social support may be conceptualized as both a form of coping (i.e., seeking support) and as a resource for coping, but it is sufficiently prominent in the stress literature to merit attention in its own right. Support from others equips the individual with the necessary social skills and social connections required to build an extensive and supportive social network (Salovey et al., 1999; Zeidner, Matthews, & Roberts, 2009). Thus, in times of need, emotionally intelligent individuals may be better able to rely on rich social networks to provide an emotional buffer against negative life events. Reviews of the impact of support on stress outcomes agree that both actual and perceived support are beneficial, although in some circumstances support may be unwelcome (Taylor, 2011; Uchino, Cacioppo, & Kiecolt-Glaser, 1996).

Social support is also plausible as a mediator of the effects of EI (Schutte, Malouff, Thorsteinsson, & Rooke, 2007). For example, Perera and DiGiacomo (2015) found that trait EI was positively associated with higher levels of perceived social support, which in turn mediated the link between trait EI and psychological adjustment among freshmen university students. Trait EI has also been reliably linked to greater satisfaction in romantic relationships from both partners' perspectives (Malouff, Schutte, & Thorsteinsson, 2014).

We did not locate any studies that link ability EI to the size of social networks, but the MSCEIT predicts some aspects of self-perceived quality of interpersonal relationships (Rivers, Brackett, Salovey, & Mayer, 2007), including intimate relationships (Zeidner, Kloda, & Matthews, 2013). The association between ability EI, as assessed by the MSCEIT, and social support is not only a matter of self-perception. High scorers on the MSCEIT are seen by others as showing higher quality social interaction, as evidenced by observer rating (Lopes, Brackett, Nezlek, Schutz, Sellin, & Salovey, 2004) and behavioral observation data (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). Recent research by the authors (Zeidner et al., 2016; Zeidner & Matthews, 2016) attests to the importance of social support as a factor mediating the relationship between ability EI and psychological adjustment outcomes. Thus, emotionally intelligent individuals may be more effective in eliciting support from others and in profiting from the support offered.

Questioning the Conventional Wisdom of EI, Coping, and Outcomes

Many accounts of EI (e.g., Bar-On, 2000) assume that people can be rank-ordered in terms of their personal coping efficacy, reflecting a coherent set of underlying competencies for handling affectively loaded encounters. The simple causal

chain is that emotional competence leads to more effective coping that, in turn, leads to more positive outcomes, that is, emotional intelligence → effective coping → adaptive outcomes. However, the transactional perspective we have developed (Matthews & Zeidner, 2000) presents challenges for this oversimplified position.

First, *coping strategies may not be universally adaptive or maladaptive*. It is assumed that the coping strategies linked to EI, such as use of problem-focus in place of emotion-focus, are generally effective. However, as stressed by Zeidner and Saklofske (1996), we cannot in general partition coping strategies into those that are universally adaptive and those that are not. In any case, the outcomes of coping are complex and multifaceted. In other words, operationalizations of EI may not signal overall adaptive advantages, but rather qualitatively different patterns of costs and benefits related to the preferred mode of coping. For example, high interpersonal sensitivity and empathy may stand in the way of a task-focused goal when the student is faced with a choice between helping a friend in need or studying for the exams.

Second, *EI competencies may be largely independent of each other*. If EI represents a coherent psychological construct, then different socioemotional competencies should be correlated. With respect to stress, the various, distinct mechanisms for adaptive coping should intercorrelate. Thus, individuals who are effective at mood regulation should also possess a richer and more effective repertoire of coping strategies and should be adept at resolving conflicts. However, competencies identified with EI might not be positively correlated. For example, a ruthless CEO might be highly effective in managing others' behaviors to attain corporate goals, but lack empathy. Conceivably, handling emotive situations might be influenced by a variety of unrelated competencies. If so, EI (like "stress") might be a useful umbrella label for a broad area of inquiry, but the term should not be assumed to identify a single, global construct.

Consider, for example, the competencies contributing to managing emotions, one of the core abilities attributed to EI. Multiple factors might contribute to difficulties in emotional management (see also Gross & John, 2002). Thus, a problem with student anger and aggression in the classroom might variously reflect temperamental irritability, misappraisals of others (teachers, classmates) as hostile (information processing), brooding on themes of injustice and retaliation (self-regulation), or lack of skills for dealing with specific sources of frustration, such as an authoritarian teacher or domineering classmates (knowledge). It is far from clear that these different sources of dysfunctional anger management can be grouped together as lack of EI.

Third, *adaptations may be situation-specific*. People with high EI should express it in a variety of situations. For example, students with good impulse control should be able to resist qualitatively different impulses. However, this need not be the case; consider, for example, a college student who might be good at resisting most impulses, but then binge-drinking alcoholic beverages in the evenings. Research on EI has neglected situational moderators by almost exclusively operationalizing coping and stress through global measures.

Furthermore, in recent research (Matthews et al., 2006), we are beginning to find some contexts in which EI is not adaptive (e.g., managing high workloads), but there may be allied situations (e.g., team performance) in which one or more EI constructs does moderate stress response. At this point, we simply do not know which contexts are most relevant, and there is an urgent need for studies focusing on the role of EI in facing specific types of challenge.

Thus, it appears that interpreting EI as representing some global coping ability is misconceived. It is difficult to categorize coping strategies as generally adaptive or maladaptive (except, perhaps, in the case of dysfunctional strategies associated with clinical disorders). Likewise, individuals cannot be classified as more or less adapted in some generic sense: individual differences in adaptation to external demands and pressures appear to be context-bound and contingent upon the criteria used to define “adaptation.” Adaptive coping in a given situation depends on a variety of independent competencies and their interaction with unique features of the situation itself.

Unresolved Issues, Pitfalls, and Fissures

The empirical data leave many issues unresolved. First, the few studies looking at the relationship between EI and coping have not been conducted in school settings, so the specific role of EI as a factor in adaptive coping with school stress remains an unresolved issue. If we do extrapolate from existing studies to school contexts, a second issue is the extent to which findings are simply a consequence of the well-known confounding of trait EI scales with personality assessments. On the basis of the overlap between trait EI and both extraversion and low neuroticism, biases toward positively framed coping strategies, and away from negatively framed strategies, are exactly what might be expected (e.g., Dawda & Hart, 2000). However, although some studies have neglected to control for personality, both Petrides et al. (2007) and Gohm and Clore (2002) showed that a number of associations between trait EI and coping remained significant with the Big Five personality traits controlled.

A third issue is that both trait EI and coping scales may actually reflect stress outcomes. Petrides et al.’s (2007) trait EI scale includes items for general mood, and the example item they give for their emotion-focused coping scale is “Feel worthless and unimportant,” which seems more like a symptom of maladaptive coping rather than a strategy that someone would choose to manage emotion. If both trait EI and coping scales are picking up moods and stress symptoms, it is not surprising that the two measures should correlate – but such data tell us little about the coping process.

A fourth troubling issue is that EI appears to be a considerably more robust predictor of general style of coping than of measures of actual coping in a specific situation, such as in evaluative academic contexts. In line with the previous comment, EI scales may simply pick up generic attitudes about self-efficacy and coping, which are not necessarily indicative of the person’s choice of strategy for dealing

with a specific stressor. It is possible, though, that the weakness of EI as predictor reflects the task challenges used to induce situational stress. Perhaps EI would relate more strongly to coping with organizational and social stressors – an area for future research.

A fifth issue is that the mechanisms linking EI constructs to coping and stress outcomes remain obscure. A promising mediating mechanism is coping through seeking emotional social support, which has been implicated both in the effects of self-reported EI (Goldenberg, Matheson, & Mantler, 2006) and performance-based EI (Zeidner & Matthews, [in preparation](#)). However, it is important to differentiate availability of social support from coping by seeking support. Various studies show that EI relates to perceptions of the size and quality of social networks (e.g., Lopes, Salovey, & Straus, 2003), but availability of social support may be a product of superior social skills rather than coping. The emotionally intelligent person may simply make friends more easily, irrespective of stress. Some evidence in favor of mediation by coping comes from studies reported by Ciarrochi (e.g., Ciarrochi, Wilson, Deane, & Rickwood, 2003), which showed that troubled adolescents are less likely to seek help if they are low in emotional competencies, even when social support is potentially available.

Finally, in research to date, the relations of EI and coping to academic outcomes tend to use a narrow criterion space: students' grades. However, qualities like EI and coping skills may be more important for other diverse outcomes such as staying on in school, exhibiting exemplary citizenship behaviors, remaining engaged, and other valued academic outcomes rather than grades per se. Future research on EI and coping may also benefit from a more fine-grained conceptualization of coping, particularly differentiating between the multitude of emotion-focused coping strategies, such as seeking social support, self-blame, wishful thinking, rumination, and positive reappraisal. The current conceptualization of emotion-focused coping concentrates primarily on the more negative aspects, and results may vary for different narrow conceptualizations of coping (Carver & Connor-Smith, 2010).

Conclusions

This chapter discussed the theory and evidence supporting the claimed role of EI in coping with stress, focusing on educational settings. Overall, EI is currently evaluated as being an important and valuable potential personal resource for students in school settings. The available literature points to a positive relationship between EI and action-oriented coping strategies and a negative relationship between EI and use of palliative and avoidant strategies. EI also appears to be a more robust predictor of general coping styles than measures of actual coping in a specific context. Indeed, EI may not signal overall adaptive advantage but rather qualitatively different patterns of costs and benefits related to specific modes of coping. Each of these results appears measure-dependent, with self-report EI measures showing more robust relationships than ability-based EI measures.

The implications of current research on coping in school settings for the role of EI are complex. On the one hand, theory would suggest that students high in EI would show a preference for problem-focused over other forms of coping when something can be done to alter the source of stress. However, when little can be done to alter the source of stress, emotion-focused coping should be the most adaptive. Unfortunately, there is little published research that bears this out, and further research is needed to test these hypotheses. On the other hand, given the research that suggests that individual coping efforts are not entirely effective in making a difference at school, it is questionable to what extent coping strategies would be helpful to those emotionally intelligent individuals who apply them.

Furthermore, there is only a scant amount of peer-reviewed studies in the literature (e.g., MacCann, et al., 2011, 2016; Perera & DiGiacomo, 2015) that systematically looked at the relationship between EI, coping, and adaptive outcomes in school settings. Thus, we are in urgent need of studies, which enable students to report events or stressful encounters that are important to them in specific school sites, how they cope with them, and the role of EI in coping with school-based stress. Research has yet to establish that general EI plays some unique role in the coping process.

Current thinking suggests that it may be misplaced to construe EI as representing some global coping capacity. As coping experts have noted, it is difficult to classify coping strategies as generally adaptive or maladaptive. Individual differences in coping appear context dependent, and adaptive coping depends on an ensemble of independent competencies and their interaction with the unique features of the situation. Thus, adaptation to stress may be situation-specific, and individuals with high EI may not express their abilities across situations.

Studies that have investigated EI, coping, and mood regulation within specific contexts (e.g., Matthews et al., 2006) should be better-suited than studies using global coping measures for identifying mediating mechanisms, but this promise has yet to be fully realized. The personality and situational factors that moderate the impact of EI on coping remain relatively obscure. It has also yet to be established that the coping styles characteristic of high scorers on tests for EI actually confer any direct benefits in terms of well-being, behavioral adaptation, or health. Also, research is needed to examine the unique role of EI in factors not currently captured by facets of the five-factor model of personality, such as attention to emotions, emotional clarity, adaptive disclosure of emotions, and emotion repair. Additional empirical research is also needed to convincingly demonstrate EI plays a unique role in the coping process.

With those empirical gaps in mind, current research suggests that the relationship between emotion management and success at school may be at least partly due to the coping strategies that students use. As such, policy and interventions aimed at teaching and encouraging problem-focused coping might be beneficial for students' academic success. Carefully designed experimental studies examining this proposition are needed, as are additional studies that expand the outcome space beyond grades to include measures of student retention, citizenship, and engagement.

The literature suggests that EI may serve as a buffer against stress and support adaptive coping. Currently, empirical studies suggest particular coping strategies are only weakly related to outcomes. Because existing research literature does not support the notion of a continuum of adaptive competence, there are no accepted criteria for rating the outcomes of events in terms of overall adaptive success or failure. More generally, it is central to the transactional approach that emotions must be understood within the specific context in which they occur. Although the concept is superficially appealing, the bulk of the evidence suggests that we cannot identify EI with emotional adaptability. Thus, we are skeptical that EI will be shown to be an aptitude central to adaptive coping. Yet, we are not dismissive, in that specific constructs labeled as EI may prove to add to existing understanding of the stress process. Progress of this kind requires (1) clear conceptual and psychometric discrimination of the multiple constructs related to emotional competency, (2) a strong focus on mediating mechanisms, (3) a strong focus on situational moderators of EI and coping effects, and (4) an emphasis on building causal models using data from experimental and longitudinal studies.

For some years now, intelligence researchers have come to the realization that IQ tests may not predict the lion's share of variance in important educational settings. IQ measures tend to reach a ceiling in predicting criterion measures – accounting for about 25% of criterion score variance, at best. By the same token, EI researchers need to tone down their overly optimistic expectations of the practical value of EI in school and academic contexts, as well as other applied settings. Furthermore, it is important to realize that in partitioning variance accounted for by person (EI), situation, and the person by situation interaction, it is the latter two components that may account for the lion's share of the variance in performance in applied settings. In this regard, systematic efforts directed at modifying school environments and pedagogical approaches that support students' academic and social-emotional learning may be of greater value (see Chap. 6 by Denham & Bassett, this volume; Chap. 7 by Hoffmann, Ivcevic, & Brackett, this volume; Chap. 8 by Humphrey, this volume).

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Chapter 5

The Role of Culture in Understanding and Evaluating Emotional Intelligence



Alex C. Huynh, Harrison Oakes, and Igor Grossmann

Abstract The current understanding of emotional intelligence (EI) is flawed and incomplete. In the present chapter, we briefly highlight some of the major controversies surrounding EI, including the lack of agreement on how to define it and measurement inconsistencies. We propose that the key gap in current EI scholarship concerns the lack of awareness of cultural impacts on affective processes that underlie various components of EI abilities. Drawing from prior theoretical models, we overview three components that have been described as encompassing the construct of ability EI: emotion perception, emotion understanding, and emotion regulation. For each of these components, we review the relevant cultural literature and discuss how cultural differences can play a substantial role in our understanding of EI as an overall construct. We conclude by discussing how culture should be incorporated into the application and assessment of EI abilities. Ultimately, we propose that one cannot truly understand and talk about EI without considering the context of culture.

Consider for a moment that Jian Lee and Geoffrey Hutchins have recently become friends. Both are students in the 8th grade at a school in the USA. Jian Lee's family recently emigrated from East Asia, while Geoffrey's family has lived in the USA for several generations. One day, Geoffrey comes to school extremely angry. His mother grounded him for 2 weeks that morning after he had a fight with his younger brother. When he tells Jian Lee the story, Jian Lee expresses very little emotion in response. The lack of expression annoys Geoffrey. He wonders why Jian Lee does not seem to care about his anger over his mother's punishment, and he begins to express his frustration at Jian Lee, raising his voice and becoming increasingly animated. Jian Lee appears very uncomfortable with Geoffrey's emotional display and becomes even quieter. Eventually, the bell rings and the boys unhappily walk to their first class.

Author Note: Author order for the first two authors was determined by a random draw.

A. C. Huynh (✉) · H. Oakes · I. Grossmann (✉)

University of Waterloo, Waterloo, ON, Canada

e-mail: alex.huynh@uwaterloo.ca; hoakes@uwaterloo.ca; igrossma@uwaterloo.ca

What conclusions can we draw from this scenario? Is Jian Lee genuinely uninterested in Geoffrey's anger at being grounded? Might Geoffrey be an aggressive boy that takes his anger out on those around him? To answer these questions, we need to consider the cultural differences in emotions that drive each of their behavior.

East Asians tend to suppress showing their feelings, while European Americans express theirs (Matsumoto et al., 2008). In keeping with East Asian cultural norms, Jian Lee is more likely to mask his emotions than express them directly. On the other hand, European American cultural norms suggest that Geoffrey is more likely to express his emotions directly. The results of these divergent norms around emotion expression have very real implications for cross-cultural relationships. While Geoffrey may think Jian Lee is disengaged and doesn't care about his feelings, Jian Lee may believe that Geoffrey's emotional display is highly inappropriate and perhaps even embarrassing. Moreover, a European American teacher observing the boys' interaction may infer that Jian's response is inappropriate, perhaps coming to believe that he lacks emotional intelligence (EI). However, to understand each child's perspective requires an appreciation of cultural differences in emotion processes. The ways these processes differ across cultures affect how we think about EI within each culture, including its meaning, evaluative standards, and consequences.

Emotional intelligence has gained widespread popularity over the past few decades. Whether applied to relationships, academics, or the workplace, EI is often promoted as a very important—if not the *most* important—skill to achieve success within a given domain. This is especially the case in schools and within the workplace. Numerous consulting and coaching firms now provide testing of and training on EI for top corporations, promising financial success, “turbocharged” careers, more effective leadership, more fulfilling lives, and better relationships to those who improve their EI skills (e.g., Bell, 2012; Bradberry, 2016; Doran-Smith, 2013; Fletcher, 2012; Segal & Smith, 2016). Despite its widespread popularity, however, we believe that both public and academic understanding of EI is incomplete. Currently, our understanding of EI does not reflect the fundamental role of culture for emotion appraisals, recognition, and regulation, nor does it reflect the consequences of these emotion processes for people's well-being. As our societies become increasingly multicultural, the importance of considering and understanding cultural differences grows exponentially. In the present chapter, we systematically evaluate the role of culture for various EI-related processes and highlight ways in which we can begin to incorporate cultural sensitivity into EI applications and assessments.

Defining Emotional Intelligence

Theoretical models of EI can be divided into ability-based and trait-based perspectives. Ability models construe EI as a form of intelligence, focusing on crystallized emotion knowledge and emotion-related cognitive processes (Mayer, Roberts, & Barsade, 2008; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume). Trait models view EI as an aspect of personality, focusing on dispositional

tendencies and self-concepts reflective of emotionally competent functioning (Petrides, 2010; see also Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). In this chapter, we use the ability-based perspective to illustrate how cultural differences can substantially impact our understanding, assessment, and applications of EI.

The concept of ability EI is perhaps linked most strongly to the work of John D. Mayer and Peter Salovey. They initially defined EI 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 action” (Salovey & Mayer, 1990, p. 189). Since then, they and others have offered several revised definitions of EI (e.g., Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Joseph & Newman, 2010; Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2004), all of which involve, to varying degrees, “the perception, understanding, and regulation of emotion” (Cherniss, 2010, p. 184).

Mayer and Salovey’s (1997) initial ability-based model of EI proposed a four-branch structure: emotion perception, emotion understanding, emotion facilitation, and emotion regulation. The authors also developed a performance-based assessment tool to measure these EI abilities, the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, Caruso, 2002; Mayer, Salovey, Caruso, & Sitarenios, 2003). Evidence of the validity of this model, however, is mixed. In particular, emotion facilitation and emotion regulation seem to be conceptually redundant, as emotion facilitation involves inducing specific emotions in pursuit of goals (Salovey & Mayer, 1990), much like emotion regulation involves down- or upregulation of emotion (Cole, Martin, & Dennis, 2004; Gross, 1998). Further, several researchers have shown that MSCEIT models without emotion facilitation fit data better than models including it (Gignac, 2005; Palmer, Gignac, Manocha, & Stough, 2005; Rossen, Kranzler, & Algina, 2008).

To address these limitations, Joseph and Newman (2010) proposed a cascading three-branch model of ability EI, collapsing emotion facilitation and emotion regulation into one branch. As with prior research, their results showed that this three-branch model fit the data better than Mayer and Salovey’s (1997) four-branch model. The three branches are (1) emotion perception, (2) emotion understanding, and (3) emotion regulation (Joseph & Newman, 2010). The model is described as cascading because each branch is sequentially related to the following branch. That is, emotion perception is required for emotion understanding, which is likewise needed for emotion regulation. Using this model as the working definition of ability EI, we move on to a brief review of prior work that discusses further limitations of EI.

Limitations of the Ability EI Construct

Researchers have criticized EI on account of its lack of incremental validity, suggesting it explains only an additional 1% - 7% of the variance in workplace outcomes, above and beyond cognitive ability and personality variables (O’Boyle,

Humphrey, Pollack, Hawver, & Story, 2011; Van Rooy & Viswesvaran, 2004). This suggests that more than 90% of the outcomes that EI measures predict is already accounted for by measures of cognitive ability and personality variables. One exception to this general finding is for jobs that require positive emotional displays (i.e., high emotional labor), such as customer service positions. For high emotional labor, Joseph and Newman (2010) found that ability EI measures *did* add incremental validity in predicting workplace success, after controlling for cognitive ability and personality. This was tempered, however, by the finding that for jobs not requiring specific emotional displays (i.e., low emotional labor), the validity of ability EI measures was weaker and, at times, negatively—instead of positively—related to workplace success (Joseph & Newman, 2010). Although not inconsistent with the EI theory, this picture is certainly more modest than some of the early claims about the all-importance of EI (e.g., Goleman, 1995).

Moreover, EI researchers have paid fairly little attention to the role of contextual factors when assessing EI (Ybarra, Kross, & Sanchez-Burks, 2014). For example, in their review of ability EI assessment, Mayer et al. (2008) concluded that higher EI scores are positively associated with better social, familial, intimate, and professional relationships, better psychological well-being, and higher academic achievement, but they did not acknowledge the largely Western samples from which they drew their results, nor did they address the overall lack of cross-cultural research on EI assessment. Moreover, as pointed out by Shao, Doucet, and Caruso (2015), the answer key for the MSCEIT is often standardized on Americans, rendering results of its cross-cultural applications questionable.

Altogether then, there appears to be a lot of uncertainty concerning the construct of ability EI. Critics disagree on its definition, how to measure it, and whether it provides meaningful incremental validity for predicting organizational outcomes (except high emotional labor positions). Further, the role of culture for EI has been widely neglected. To fill this void, in the present review, we highlight the cross-cultural differences (and similarities) in the emotion processes that make up each of the three branches of Joseph and Newman's (2010) cascading model of ability EI.¹ Although there is little research on the cross-cultural applications of EI assessment, we believe that our approach can shed light on the mechanisms purported to drive EI and thereby make useful suggestions for applying and assessing EI in a culturally sensitive way.

Culture and EI Abilities

The past several decades in psychological research have provided the field of cultural differences with a wide array of dimensions and definitions. To name a few, the assessment of cultural differences has been studied along the dimensions of

¹In our view, the different facets of the model mutually influence each other. Rather than assuming one particular directionality, we view these three facets of ability EI merely as a guideline for the categorization of mutually reinforcing processes.

individualism vs. collectivism, independence vs. interdependence, long-term vs. short-term orientation, masculinity vs. femininity, and tightness vs. looseness (Gelfand et al., 2011; Hofstede, 1983; Hofstede & Bond, 1984; Schwartz, 1994; for a review, see Grossmann & Na, 2014). For the purposes of discussing cultural differences in EI, we focus on the more commonly studied dimensions of cultural differences, individualism vs. collectivism (in values; Hofstede & Bond, 1984; Triandis, 1995), or what is also commonly referred to as independence vs. interdependence (in self-concepts, motivations, and emotions; Markus & Kitayama, 1991).

Past research suggests that cultures differ in the extent that their members adopt independent vs. interdependent self-concepts (Markus & Kitayama, 1991). Independent self-concepts focus on the individual self and are more common among people from Western countries such as Germany, the UK, the USA, or Canada. Self-fulfillment, personal achievement, and personal rights and liberties are highly valued in individualistic cultures, where people tend to have independent self-concepts. In contrast, interdependent self-concepts are socially focused and more common among people from many Asian countries, Eastern Europe, Africa, and Central and South America. Group goals, social responsibilities, relationships, and conformity are highly valued in collectivistic cultures, where people tend to have interdependent self-concepts.

It is important to note, however, that inter- and independent self-concepts can also exist within the same culture. As we will discuss later, social groups within a country can form distinct subcultures and be more or less independent based on their social economic standing (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012). Likewise, in a multicultural society like Canada, many groups retain elements of their ethnic culture while also adopting characteristics of the mainstream Canadian culture. This is called *biculturalism* and can take the form of a person having both collectivist and individualist cultural identities (Hong, Ip, Chiu, Morris, & Menon, 2001; Hong, Morris, Chiu, & Benet-Martínez, 2000). Ultimately, cultural differences in independence and interdependence influence each branch of Joseph and Newman's (2010) ability EI model, whether they do so across or within countries.

Emotion Perception and Culture

Emotion perception is the first branch of Joseph and Newman's (2010) model and the foundation on which ability EI is constructed. It is comprised of "the ability to identify emotions in oneself and others, as well as in other stimuli, including voices, stories, music, and works of art" (Brackett et al., 2006, p. 781). In this sense, a person requires the ability to perceive emotion to identify the despair of Fantine in Hugo's (1862/1992) *Les Misérables*, in the same way as she/he requires emotion perception to determine that someone who is crying is likely experiencing sadness. According to the model, a person cannot be said to be emotionally intelligent without the ability to perceive emotions—and to perceive them correctly. Given the

fundamental role of emotion perception, it comes as little surprise that many researchers have extensively studied its underlying processes. We break down a few culturally sensitive components of emotion perception in the following sections.

Emotional Expression One of the key processes in emotion perception is the recognition of emotional expression. The study of emotional expression dates back to Darwin and his book, *The Expression of the Emotions in Man and Animals* (Darwin, Cummings, Duchenne, & John Murray, 1872). Nearly a century later, Ekman and Friesen (1969) advanced the argument that emotional expression is both universal and culturally variable, a claim that would drive a wealth of research on cultural differences and similarities in emotion perception. Almost 20 years later, Ekman, Friesen, and colleagues (1987) published results demonstrating substantial agreement across ten countries on the interpretations of emotions in facial expressions. While they also hinted at cultural variation in the perceived intensity of these emotions, they deemed their evidence inconclusive (Ekman, Friesen, et al., 1987). Recently, Shao et al. (2015) attempted to determine how universal (i.e., consistent across cultures) or culturally determined the three branches of Joseph and Newman's (2010) ability EI model are. Across two studies with samples from America, India, China, Argentina, and Japan, the authors found that emotion perception is the most universal of the three branches (Shao et al., 2015).

Despite the evidence supporting the universality of emotion perception, there are also signs of cultural specificity in this process. Elfенbein and Ambady (2002) reviewed 182 studies on emotion recognition and found that the mean accuracy rate across these studies was only 58% ($SD = 19.6\%$), leaving lots of room for cultural variability. The authors also found that accuracy varied across channels of emotional expression. That is, for nonverbal channels such as static facial expressions of emotion, cross-cultural accuracy was higher than for more complex, dynamic channels. The authors suggested that photographs of emotional expression may be “stylized and exaggerated to improve legibility, using conventions that may be partially culture-specific” (Elfенbein & Ambady, 2002, p. 230). Ultimately, this and other work point out that emotional experiences and expression are complex and dynamic, rendering them harder to interpret. However, as the authors point out, studying emotions in a more complex and dynamic way will increase the ecological validity of the research, even if it reveals that emotion perception is less universal than originally thought.

Attention to Emotion Stimuli Notably, emotion perception requires attending to certain emotion-related stimuli. Beyond differences in which channels are perceived most accurately, culture greatly impacts what emotion-related stimuli people pay attention to. For instance, Jack, Caldara, and Schyns (2012) found that people in the West pay more attention to the eyebrows and the mouth when deciphering facial expressions. Chinese participants, on the other hand, paid more attention to the eyes. Further, cultures vary in the attention they tend to pay to positive vs. negative stimuli and how quickly they recognize positive vs. negative words (Grossmann, Ellsworth, & Hong, 2012). In this work, Russians spent more time looking at negative stimuli, while Americans looked at positive and negative stimuli for the same amount of time. Further, people with Latvian and Russian cultural identities recog-

nized negative and positive words relatively slower or faster, depending on which identity was temporarily activated. That is, when their Latvian identity (which is more independent) was made salient, participants were relatively faster to recognize positive words and slower to recognize negative words than when their Russian identity (which is more interdependent) was made salient.

Building on the notions of interdependent vs. independent selves in an East Asian vs. North American comparison, some scholars have argued that in an East Asian context, people do not see emotions as necessarily reflecting one's inner self, but as intertwined with the feelings of the larger group instead (Mesquita & Markus, 2004). In contrast, research suggests that most Americans believe they can infer emotion from another person's face alone (Carroll & Russell, 1996). Masuda et al. (2008) addressed this issue by tracking the eye gaze of American and Japanese participants while presenting them with images of children's faces that were expressing various emotions. In the middle of the picture was a central figure whose facial expression was either congruent or incongruent with facial expressions of those in the background. The researchers found that Japanese participants' gaze was drawn to both the focal figure and the background figures, more so than Americans. Moreover, Japanese participants were more influenced by the emotions of those in the background when asked to judge the emotions of the central figure, such that when the background figures were congruent with the central figure, Japanese participants rated the focal figure as higher in that specific emotion. For Americans, the emotions of the background figures did not impact their ratings of the central figure's emotions.

Subcultural Differences Cultural differences in emotion perception are not limited to differences between countries but can also involve different social groups within a country. One example of this is captured by research on social class differences. Although it may not be frequently acknowledged, social class encompasses much of a person's daily life, permeating communities, neighborhoods, and schools. This perspective has impacted recent theorizing on the construct of social class, with many researchers approaching social class as a form of culture (e.g., Grossmann & Huynh, 2013; Kraus, Piff, & Keltner, 2011). In the process of doing so, social class has provided researchers with a much more accessible method of exploring the influence of cultural differences, including cultural aspects of emotion perception.

Some of this research indicates that socioeconomic background matters in how accurately people perceive others' emotions (Kraus, Cote, & Keltner, 2010). People from a lower socioeconomic background (lower-SES) are more contextually focused in their behavioral and thought patterns, promoting an interdependent, other-oriented focus on emotion and behavior. On the other hand, people from a higher socioeconomic background (higher-SES) live in a culture that emphasizes individualism and self-focus regarding their feelings and behavior (Grossmann & Varnum, 2011; Kraus et al., 2011).

These differences in social orientation have implications for emotion perception as well. Kraus et al. (2010) administered the MSCEIT (Mayer et al., 2002) to a sample of university employees who either had or had not received a 4-year college

degree. The test consisted of identifying the most prevalent emotion in photographs of human faces. The researchers hypothesized that participants without a 4-year degree (vs. those with a 4-year degree) would score higher in the accuracy of another person's emotions because the lower-SES culture is similar to collectivistic cultures regarding their awareness of others and others' actions. The researchers found support for what they predicted, namely, that those who did not receive a 4-year college degree were significantly better in accurately identifying the emotions expressed in the test's photographs than those who had a 4-year degree.

The evidence for cultural differences in emotion perception across ethnic and social class groups strengthens the argument that cultural differences have important implications for the emotion perception component of EI. Culture has an impact on how people think about and experience the world; differences in our environments contribute to the development of different social groups and affect how people come to interpret the emotions of others. Importantly, research suggests that cultural differences in emotion perception emerge not only *across* cultures (e.g., Western vs. Eastern) but also *within* cultures (i.e., higher-SES vs. lower-SES).

Emotion Understanding and Culture

The second branch of ability EI consists of macro and micro levels of emotion understanding. At the macro level, this refers to a structure of knowledge that includes one's beliefs about how emotions change over time, which emotions are appropriate in certain situations, and how emotions differ from one another (Joseph & Newman, 2010; Mayer & Salovey, 1997). At the micro level, this branch refers to a more implicit understanding of one's own emotions. That is, how we experience, understand, and represent our emotions. At both levels of understanding, one must first be able to accurately perceive an emotion—hence emotion perception “cascades” into emotion understanding. Of importance to this second branch of ability EI are factors on which cultural differences begin to emerge more strongly, such as differences in relationship structures, belief systems, social orientation, mixed emotions, importance or value of certain emotions over others, and the awareness of emotion causes (de Leersnyder, Boiger, & Mesquita, 2013; Shao et al., 2015). We have already addressed how several of these factors influence emotion perception (and hence, emotion understanding); here we turn to those not discussed in the previous section.

Macro-level Emotion Understanding

Emotion Origins One of the key considerations for emotion understanding involves lay beliefs about the origins of emotions. Researchers have proposed that because interdependent cultures (e.g., China, Japan) tend to view most behavior as relational or conjoined, emotional experiences in these cultures are more likely to be seen as

arising from relational contexts (e.g., family members, friends, coworkers). In contrast, independent cultures that tend to see behavior as separate and individually determined (e.g., the USA, the UK) are more likely to view emotional experiences as driven by a single entity or person (Uchida, Townsend, Markus, & Bergsieker, 2009). These cultural differences in the perceived origin of emotions have implications for how people come to understand their emotional experiences.

To highlight this process, imagine one's emotional reaction to winning a sporting event. Would one be more likely to interpret his or her emotions as coming from within oneself or as arising from the environment? If one comes from the USA, one is more likely to interpret emotions as primarily internal; if one comes from Japan, however, one is more likely to interpret one's emotions as driven by a combination of internal and social contextual cues, including people who make up the social context (Uchida et al., 2009).

Emotions and Relationships To better understand why emotion processes differ across cultures, it is important to recognize that emotions are closely connected to social relationships (Frijda & Mesquita, 1994; Keltner & Haidt, 1999). Cultural context plays a major role in shaping relationships. In turn, people's emotion understanding tends to reflect the impact of the cultural context on their relationships (de Leersnyder et al., 2013). Among European Americans, individuality and autonomy tend to be valued relationship models (Kim & Markus, 1999; Rothbaum, Pott, Azuma, Miyake, & Weisz, 2000; Triandis, 1995). As a result, emotional experiences that threaten autonomy and emphasize interconnectedness are not as valued (Kitayama, Mesquita, & Karasawa, 2006) as among East Asians who tend to value interconnectedness in their relationship models (Kim & Markus, 1999; Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997), emphasizing the accommodation of each other's limitations and strengths (Lebra, 1992; Heine, Lehman, Markus, & Kitayama, 1999; Kim & Markus, 1999; Oishi & Diener, 2003). Regarding valuing emotional experiences, these differences suggest that East Asians are more likely to value the emotional experience of guilt and shame, for example, because these emotions reflect social awareness and interconnectedness (Kitayama & Markus, 2000; Kitayama et al., 1997, 2006). European Americans, on the other hand, are less likely to value these emotional experiences because they do not align with being autonomous and independent. For both cultures, the emotional experience is the same (i.e., feelings of guilt and shame), but the influence of culturally valued relationship models determines how these emotional experiences are understood (i.e., desirable vs. undesirable).

Mixed Emotions There is a consensus that East Asian cultures are more likely than Western cultures to report experiencing pleasant and unpleasant emotions at the same time (Bagozzi, Wong, & Yi, 1999; Schimmack, Oishi, & Diener, 2002; Scollon, Oishi, Diener, & Biswas-Diener, 2004). Early studies pointed to key distinctions in cultural belief systems as an explanation for why emotional experiences differed across cultures. For example, Eastern cultures have historically been associated with teachings that emphasize the complementarity of opposites and the balance of contradiction (e.g., Confucianism, Taoism). However, recent research suggests that differences in belief systems cannot wholly account for these experi-

ential differences in cultural understanding of emotions. This is particularly evident when considering that cultures that do not share the historical teachings of East Asia still show varying degrees of complexity. Rather, recent research suggests that differences in inter- and independent social orientations better explain cultural differences in emotional complexity (Grossmann, Huynh, & Ellsworth, 2015). The researchers argue that seeing emotions as an interaction of the situational context and those involved—as interdependent cultures tend to do—enables recognition that situations can evoke multiple types of emotion and allows for the recognition of multiple forms of emotion in and across situations.

Micro-level Emotion Understanding

Reporting Emotions and Emotional Experiences These culturally divergent views of emotional experiences influence whether people report experiencing specific types of emotions. In one study, European Americans reported experiencing socially disengaging emotions (e.g., pride, anger) more frequently and intensely in their past emotional experiences than Japanese (Kitayama et al., 2006). Socially engaging emotions (e.g., shame, guilt) showed the opposite pattern: Japanese reported greater intensity and frequency of these emotions in past emotional experiences than European Americans (Kitayama, et al., 2006). In another study, researchers compared televised studio interviews of Japanese and American winners from the 2004 summer Olympic Games in Athens, Greece (Uchida et al., 2009; Studies 1–2). They coded the degree to which the athletes mentioned emotions in their responses to questions from the interviewers. While athletes from both cultures mentioned emotions to a similar degree when asked about their emotional experience, Japanese athletes were significantly more likely than American athletes to mention emotions when interviewers asked them about others (e.g., family, coaches, teammates). Moreover, when researchers asked Japanese and American participants to describe the reactions of athletes who had just won the Olympic finals, American participants were more likely than Japanese participants to describe the athletes as expressing self-focused than self- and other-focused emotions. These studies suggest that emotional experience and emotion understanding can vary by culture; Americans' understanding of emotion and emotional experiences is more likely to focus on the self, whereas Japanese are more likely to understand their emotions and emotional experiences in relation to others.

Ideal Affect Although cultures differ on emotion processes, most people, regardless of culture, want to feel good (Tsai, 2007). What “feeling good” means, though, varies by culture. In their work on ideal vs. actual affect, Tsai, Knutson, and Fung (2006) found that European and Chinese Americans' ideal affect consists of high-arousal positive emotions (e.g., enthusiastic, excited) to a greater degree than for Hong Kong Chinese. At the same time, both Chinese Americans and Hong Kong Chinese reported that their ideal affect consisted of low-arousal positive emotions (e.g., calm, relaxed) to a greater degree than it did for their European American

counterparts. Despite the differences in ideal affect, however, discrepancies between people's ideal and actual affect were related to depression, across all cultural groups. That is, the less European Americans' actual emotional experience consisted of high-arousal positive emotions, and the less Hong Kong Chinese actually experienced the low-arousal positive emotions they valued most, the more both groups reported feeling depressed.

In line with cultural differences in ideal affect, cultures differ in where they draw their happiness from. Although Kwan, Bond, and Singelis (1997) found that both European Americans and Hong Kong Chinese derived life satisfaction from their self-esteem and the quality of their relationships, Hong Kong Chinese drew satisfaction from both sources to a similar degree, while European Americans looked more to their self-esteem for life satisfaction than their relationships.

Emotion Regulation and Culture

The third and final branch of Joseph and Newman's (2010) ability EI model is emotion regulation, defined as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross, 1998, p. 275). Of the three branches, emotion regulation is perhaps most closely aligned with the measures of success that EI is said to predict. Models of emotion regulation tie it to positive outcomes such as better health, greater workplace and academic success, and improved relationships (Brackett & Salovey, 2004; John & Gross, 2004). At the same time, some emotion regulation strategies have been shown to be detrimental to one's mental health in the long run, even if beneficial in the immediate context (Gross, 1998).

Emotion Regulation Strategies A meta-analysis of the relationship between emotion regulation and psychopathology by Aldao, Nolen-Hoeksema, and Schweizer (2010) examined six emotion regulation strategies (see Table 5.1 for definitions of each strategy). According to the authors' research, three of these are generally believed to be adaptive for one's mental health: reappraisal, problem-solving, and acceptance. The other three are viewed as risk factors for one's mental health: suppression, avoidance, and rumination. As we aim to show, however, such conclusions do not necessarily reflect cross-cultural variation in ideal affect or the emotion regulation strategies most frequently employed to achieve such a state.

Preferred emotion regulation strategies vary by culture. Research suggests that Americans tend to engage in reappraisal of emotions more often than Japanese, while Japanese are more likely to use emotion suppression than Americans (Matsumoto, 2006). Likewise, there are cultural differences in the intended outcomes of emotion regulation efforts. Chinese students in a study by Wei, Su, Carrera, Lin, and Yi (2013) showed a significantly positive relation between emotion regulation and interpersonal harmony, while this relationship did not emerge for European Americans. In line with an interdependent relationship model, it

Table 5.1 Emotion regulation strategies and their definitions

Strategy	Definition
Reappraisal	“Involves generating benign or positive interpretations or perspectives on a stressful situation as a way of reducing stress (Gross, 1998)”
Problem-solving ^a	“Conscious attempts to change a stressful situation or contain its consequences”
Acceptance	Integral to mindfulness, it involves the “non-judgmental acceptance of emotions” (Aldao et al., 2010)
Suppression	Can refer to the suppression of expression (Gross, 1998) and/or thoughts (Hayes et al., 1999)
Avoidance	Can refer to experiential (Hayes, Strosahl, & Wilson 1999) or behavioral avoidance (Mowrer, 1947)
Rumination	Repetitive focus on experiences of emotion and their causes and consequences (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Trapnell & Campbell, 1999)

Note. Definitions are drawn from Aldao et al. (2010)

^aProblem-solving is not generally seen as a direct form of emotion regulation, but as a direct strategy to address and eliminate sources of stress, thereby indirectly restoring people’s desired affective states and downregulating aversive affect (Aldao et al., 2010)

appears that, for students from an interdependent culture (i.e., Chinese but not European American students), regulating one’s emotions served to increase interpersonal harmony. In contrast, emotion regulation for European Americans served to increase hedonia—that is, European Americans attempt to increase their positive emotions and moods while decreasing their negative ones (Miyamoto, Ma, & Petermann, 2014). In a study on the effect of emotion regulation over several days, Miyamoto et al. (2014) found that European Americans experienced a steeper decline in negative—and a somewhat steeper incline in positive—emotions the day after a negative event than did Asians.

Building on these differences in preferred emotion regulation strategies and their intended outcomes, research has shown that the relationships between certain strategies and mental health are not universal. Much of the research on emotion suppression suggests that it is linked to negative outcomes such as lower well-being and negative adjustment (e.g., Haga, Kraft, & Corby, 2009; Matsumoto et al., 2008). However, most of this research has been conducted on Western samples. Cross-cultural studies show that the relationship between suppression and mental health varies substantially by culture. For example, one study found that the use of emotion suppression for European American participants was associated with greater depression and lower life satisfaction, whereas emotion suppression among Hong Kong Chinese participants was not (Soto, Perez, Kim, Lee, & Minnick, 2011). Researchers argue that while suppression is associated with some negative consequences for an individual (e.g., less social closeness, reduced rapport; John & Gross, 2004), it can also have positive consequences on a social level, helping certain cultures maintain their cultural systems (Matsumoto et al., 2008).

In a study of emotion suppression and emotion reappraisal across 23 cultures, Matsumoto et al. (2008) found opposing relationships between suppression and reappraisal. Cultures defined by a strong sense of social order and hierarchy tended to have higher scores on emotion suppression overall and showed a positive relationship between suppression and reappraisal emotion regulation strategies, whereas cultures that emphasized egalitarianism and affective autonomy tended to have lower scores on suppression and showed a negative relationship between suppression and reappraisal.

Having demonstrated culturally variable relationships between reappraisal and suppression with psychological outcomes, we move on to review cross-cultural research on rumination. Grossmann and Kross (2010; Study 1) compared the effects of rumination on Russian and European American participants. They found that Russians reported engaging in more ruminative behavior than Americans, likely because Russians tend to focus on unpleasant emotions more than pleasant emotions (Grossmann et al., 2012). As a result, Russians may be more likely than Americans to adopt ruminative strategies.

Research on Americans suggests that rumination is associated with depression and anxiety and interferes with problem-solving abilities (Aldao et al., 2010; Hong, 2007). Does it mean that Russians are more subject to mental health and poor decision-making than Americans because they ruminate more? It appears that this is not the case. Researchers found that when Russians were asked to focus on their “deepest thoughts and feelings” surrounding a negative interpersonal experience, they felt less distress over the event than when Americans were asked to do the same (Grossmann & Kross, 2010; Study 2). Why? Because of their more interdependent orientation (relative to Americans), Russians tend to ruminate on their experiences in a qualitatively different fashion than Americans, which has fundamental consequences for their mental health. Rather than immersing themselves into their ruminative experience, replaying it again and again in their mind’s eye, Russians are more likely to report reflecting on the experience from a vantage point of a distanced observer. Such tendency to distance oneself during the ruminative experience in turn promotes adaptive working through past distress.

Overall, the research is clear that culture plays a prominent role in determining people’s preferred emotion regulation strategies, the efficacy of these strategies, and their impact on mental health. Broad generalizations of the benefits or detriments of certain strategies (e.g., Aldao et al., 2010) should be avoided when they do not take into consideration the cultural context they are studied in. In the same way, EI models that include emotion regulation should avoid sweeping generalizations of how certain strategies are related to greater performance or stronger relationships. Based on the cross-cultural differences in reappraisal, suppression, and rumination, it seems reasonable to infer for the other strategies where empirical evidence is lacking that the relations between emotion regulation strategies and performance or relationship outcomes are not the same across cultures.

Summary

Upon reviewing cultural differences across the three-branch cascading model of ability EI (Joseph & Newman, 2010), we observed substantial variability in the meaning, frequency, intensity, and function of various affective processes involved in emotion perception, understanding, and regulation. Compared to people from an interdependent culture, those from independent cultures are more likely to see emotions as arising from within themselves, orient their attention toward focal features of a situation when determining what emotions someone is experiencing, and will tend to focus on a person's eyebrows and mouth when deciphering her facial expressions of emotion. Alternatively, people from interdependent cultures are more likely to see their emotions as socially constructed, orient to the context when deciding how someone is feeling, and will tend to focus on a person's eyes when identifying her facial expressions of emotion. Further, the meaning and experience of emotional appraisals like valence and arousal vary substantially across cultures: independent cultures focus on maximizing positive and minimizing negative emotions, while interdependent cultures try to balance their positive and negative emotions. Cultures also vary in their emotion regulation. Interdependent cultures are more likely to engage in emotion suppression (Matsumoto, 2006), whereas independent cultures tend to favor hedonic emotion regulation strategies, such as reappraisal (Miyamoto et al., 2014). The research we have reviewed so far demonstrates the substantial value of considering the role of culture across the various components of EI. We believe that EI cannot be fully understood without a cultural context, a point worth emphasizing as we move on to discuss the implications culture has in how researchers and practitioners have utilized the construct of EI thus far.

The Implications of Culture in EI Assessment and Application

The utility of EI across a variety of occupations is a topic of much interest, critique, and scholarly speculation (see Zeidner, Matthews, & Roberts, 2004). The application of EI in workplaces and educational institutions has been a highly controversial topic. Whereas early writings claimed that EI accounted for a large degree of the success in top leaders in business (e.g., Cooper, 1997; Goleman, 1995), others argued that there was little evidence to support those claims or suggested that the application and assessment of EI in workplaces lacked consistency (Zeidner et al., 2004). More recent research evidence points to a positive but relatively modest contribution of ability EI to performance, relationships, and well-being (Joseph & Newman, 2010; Mayer et al., 2008; O'Boyle et al., 2011).

It appears that common measurement tools for assessing ability EI (e.g., MSCEIT; Mayer et al., 2002) are inadequate for assessing EI across cultures. Moreover, cross-cultural variance in measurement can lead to biased assessment. For instance, Joseph and Newman (2010) found that performance-based measures of EI are biased in favor of White over African-American respondents, similar to

traditional measures of IQ (Cronshaw, Hamilton, Onyura, & Winston, 2006; Shuttleworth-Edwards et al., 2004; Verney, Granholm, Marshall, Malcarne, & Saccuzzo, 2005). Findings like these demonstrate that cultural considerations have not played a central role in the development of EI assessments and/or their applications, raising the question of how the knowledge about cultural differences in affective processes can guide the interpretation of EI results in educational settings and the workplace.

As a first step, it is important to identify how EI is characterized in organizational contexts. Consider the following emotional competencies that are considered critical for successful performance in the workplace: emotional self-awareness, regulation of emotions in the self, and social awareness of emotions and empathy (Huy, 1999; Goleman, 1998; Weisinger, 1998). Performance on these components will likely vary as a function of the cultural differences we discussed earlier. For example, because cultures differ on where they believe emotions are derived from (Uchida et al., 2009), they are likely to differ in their social awareness of emotions and empathy. Specifically, people from interdependent cultures will tend to understand emotions as situated within the social context. On the other hand, people from independent cultures will tend to understand emotions as situated within themselves. As a result, a person from an independent culture may experience anger when she fails to achieve a goal because she views her failure as a poor reflection on her. A person from an interdependent culture may be more likely to feel shame in the same situation because she views her failure as a poor reflection on the group.

Adopting this awareness within an educational setting, students may mirror similar reactions to failure as a function of their cultural background. That is, a student from an interdependent culture may feel more shame when he fails his final exam than a student from an independent culture, whereas the latter student may feel more anger. Further, how these students regulate their experiences of shame and anger will likely differ. The student from an interdependent culture is more likely to suppress his emotions, and if he does express them, to minimize his expression. In contrast, the student from an independent culture may attempt to reappraise his emotions once his anger subsides, but he is more likely to express his anger since it is a high-arousal emotion. As an educator with an independent cultural background, it may seem like the angry student is more upset by his failing grade than the quiet student, but this is not necessarily the case. Understanding the culturally driven responses to negative events is crucial to avoid mistakenly assuming the student from an interdependent culture is apathetic, not invested, or (in case of expressive suppression) may be at risk of harming him-/herself. As well, when addressing individual students, different strategies may be needed to respond to their unique emotional experiences.

Beyond social awareness of emotions, eliciting and channeling emotions when appropriate and restraining negative emotions are additional indicators of emotional competence and predictors of success in the workplace (Zeidner et al., 2004). Likewise, in educational settings, it is reasonable to assume that certain children may excel at eliciting and channeling appropriate emotions, whereas others may excel at suppressing negative emotions. Practically speaking, situations that require

suppression or eliciting emotions may pose varying challenges for students. In a Western setting, it may seem intuitive to think that suppression of emotional expression is associated with negative outcomes like greater depression (Aldao et al., 2010). Further, if a student comes from an interdependent culture and tends not to express her emotions readily, she may be seen as cold and unfriendly. Others may even pressure her to emote more, but doing so fails to take into consideration the fact that according to her cultural background, she is regulating her emotions appropriately and effectively.

In educational settings, the development of emotional competence is a social process that may vary markedly across different cultural contexts. Recognizing this is crucial for the implementation and development of programs focused on fostering related EI skills such as social and emotional learning (SEL) curriculum. SEL refers to a large foundation of research in educational psychology (e.g., Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011) which in part involves understanding the process by which individuals acquire core competencies to recognize and manage emotions (Elias et al., 1997; see also Chap. 7 by Hoffmann, Ivcevic, & Brackett, this volume). To foster social skills and emotional development, many educational institutions have attempted to implement SEL programs in the past (Humphrey, 2013; see also Chap. 8 by Humphrey, this volume), yet theorizing of SEL has only recently considered the element of culture in the development of teaching tools and the assessment of SEL (Martin, Collie, & Frydenberg, 2017; Torrente, Alimchandani, & Aber, 2015). In accordance with what we have discussed throughout this chapter, culture can play a pivotal role in dictating what SEL entails. To give one example, the history and belief systems prevalent in certain Asian cultures (e.g., Confucianism) emphasize the recognition and management of negative emotions much more than Western cultures, suggesting that negative emotions should be considered an important element of SEL programs in non-Western contexts (Martin, Collie, & Frydenberg, 2017). In contrast, the development of SEL programs in an entirely Western setting may not require the same level of focus on negative emotions for success in developing emotional competency. Much like the application of EI in workplace settings, when researchers and educational institutions seek to apply strategies for developing SEL, we believe it would be unwise to ignore the varied cultural perspectives on what constitutes successful social and emotional skills.

When attempting to apply a newfound awareness of the differences in emotion processes across cultures, we cannot stress how important it is to avoid viewing people as cultural stereotypes. Although interdependent cultures are more likely to suppress their emotions and minimize their emotional expression, people from such cultures will vary in the degree to which they do this. In the same way, not all people from an independent culture will be equally expressive or engage in reappraisal. Further, cross-cultural exposure may lead to a mixture of emotion regulation strategies, so that certain situations elicit emotion suppression, whereas others elicit emotion expression (Bonanno, Papa, Lalande, Wetphal, & Coifman, 2004). As such, it is important to recognize ways in which culture may shape people's emotional experiences and emotion processes more generally but to acknowledge at the same time that substantial variation exists, even within cultures.

We have only begun to scratch the surface of cultural implications in EI application and assessment. Without direct research, it is unclear how exactly different facets of EI abilities are encouraged or discouraged in various cultural contexts. What is clear, though, is that cultural influences should not be disregarded when applying or assessing EI. Future research should address the limitations of cross-cultural validation of ability EI assessments. For those looking to implement and understand insights concerning EI in their educational setting, it is important to recognize that “appropriate” emotion responses vary by culture and that there is no single, correct way to understand emotions. Understanding cultural differences in emotion is critical to begin to appreciate what having high or low EI might mean.

Conclusion

As this chapter demonstrates, emotion processes vary substantially as a function of cultural differences. These differences, however, have largely been neglected in the study of EI. We see this as a major limitation of the EI construct and suggest that, without considering cultural differences in emotion processes, current EI models lack the breadth to address the broad range of effects on leadership, well-being, and relationships they purport to explain. To address this limitation, in future research scholars should incorporate cross-cultural considerations into models of EI, and researchers should acknowledge the cultural context within which their work is situated, being careful to avoid generalizing beyond the cultural bounds of their results.

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Part II
Applications in PreK-12 Contexts

Chapter 6

Implications of Preschoolers' Emotional Competence in the Classroom



Susanne A. Denham and Hideko H. Bassett

Abstract In this chapter, we describe the nature, development, and socialization of preschoolers' emotional competence with regard to emotional expressiveness, emotion regulation, and emotion knowledge and review evidence of how these skills facilitate children's social competence and school success. Within an early childhood educational system of practice, we then consider how educational standards, teacher socialization of emotion, and assessment can work synergistically to promote preschoolers' emotional competence. Finally, we consider the current state of preschool-level emotional competence programming and assessment as adjuncts to direct teacher socialization of emotion and make some conclusions and calls for future work.

Preschoolers are learning more than ABCs – they are learning how to express and regulate all their myriad feelings and understand the emotions of self and others – they are acquiring *emotional competence*. More specifically, we define emotional competence as the ability to purposefully and fully express a variety of emotions, regulate emotional expressiveness and experiences when necessary, and understand the emotions of self and others (Denham, 1998; Hyson, 1994; Saarni, 1999). These emotional competence skills develop dramatically during the preschool years and help preschoolers to succeed at important developmental tasks of the period: maintaining positive emotional and behavioral engagement in the physical and social environment, making and maintaining relationships with other children and adults, and dealing with emotions in demanding group contexts where they are required to sit still, attend, follow directions, and navigate playing groups (Howes, 1987; Parker & Gottman, 1989).

These developments are very timely, because emotions are ubiquitous in early childhood classrooms. Learning alongside and in collaboration with teachers and peers, young children can utilize their emotional competencies to facilitate learning.

S. A. Denham (✉) · H. H. Bassett
Department of Psychology, George Mason University, Fairfax, VA, USA
e-mail: sdenham@gmu.edu

Expressing healthy emotions and regulating them, and understanding emotions of self and others, should work together to grease the cogs of successful school experiences (Denham, Brown, & Domitrovich, 2010). In fact, such competencies are identified as among the most important abilities supporting early school success and the growth of even later academic competence during elementary school (Denham, Bassett, Mincic, et al., 2012; Jennings & DiPrete, 2010; Romano, Babchishin, Pagani, & Kohen, 2010).

Educators and parents are becoming ever more aware of the importance of emotional competence and related issues (Wesley & Buisse, 2003). For example, in the USA, Head Start personnel and parents cite emotional-behavioral issues among their top needs for training and technical assistance (Buscemi, Bennett, Thomas, & Deluca, 1995; see also Piotrkowski, Botsko, & Matthews, 2000). Teachers also view children's "readiness to learn" and "teachability" as marked by positive emotional expressiveness and ability to regulate emotions and behaviors (Rimm-Kaufman, Pianta, & Cox, 2000), as well as emotional competence-related social strengths (Lin, Lawrence, & Gorrell, 2003).

A growing literature also pinpoints how emotional competence skills do contribute to early school success, including socially competent behaviors; creating positive relationships with others in the school context; early school/classroom adjustment, including teachers' views of children's classroom learning behaviors and feelings about school; children's attitudes toward learning; and pre-academic outcomes like understanding letters and numbers (Denham et al., 2010; Denham, Bassett, Mincic, et al., 2012; Zins, Bloodworth, Weissberg, & Walberg, 2007). Children who understand and regulate emotions, and who are more emotionally positive when they enter school, are more likely to develop positive and supportive relationships with peers and teachers, participate more, and achieve at higher levels throughout their early years in school. Conversely, children who enter school with fewer emotional competence skills are more often rejected by peers, develop less supportive relationships with teachers, participate in and enjoy school less, achieve at lower levels, and are at risk for later school difficulties. We will detail this evidence in this chapter.

Further, emotional competence in young children is being recognized as important within the policy area. A content analysis of early learning standards in the USA shows that most states have early childhood standards that include social and emotional competencies, albeit less systematically and with fewer indicators than cognitive skills (Barnett, Epstein, Friedman, Sansanelli, & Hustedt, 2009; Dusenbury et al., 2015; Dusenbury, Zadrazil, Mart, & Weissberg, 2011; Scott-Little, Kagan, & Frelow, 2006). Such standards occur less systematically in other nations (e.g., see the "end of key stage statements" that help teachers assess progress in the UK; Torrente, Alimchandani, & Aber, 2015). Such integration into US state standards has increased examination of these outcomes at the classroom level. Furthermore, the USA has seen recent national legislation authorizing allocation of funds for technical assistance, training, and programming related to emotional competence, including the Every Student Succeeds Act and several other bills specifically refer-

ring to social-emotional learning (Collaborative for Academic, Social, and Emotional Learning, 2017; see also Chap. 12 by Elias, Nayman, & Duffell, this volume). Given these recent happenings, there have been many calls for early childhood educators to help young children to acquire just such competencies while they model genuine, appropriate emotions and responses to emotions, discuss emotions with children, and use positive emotions to support learning (e.g., Hyson, 2002). Thus, in this chapter, we will also detail considerations of preschool teachers' socialization of emotional competence, as well as more universal classroom programming and assessment, as parts of an educational system that could work to promote young children's emotional competence.

In summary, based on these assertions, we structure this chapter as follows. First, we define expected outcomes of early emotional competence (i.e., social competence and school success). Second, we discuss each component of emotional competence in turn. For each component, we first describe its nature and development during the preschool period. Then we demonstrate evidence of how each component relates to both social competence and early school success. We also briefly consider how the components of emotional competence may work synergistically together to promote positive outcomes. It is important to note that the general tenets, developmental progressions, and outcomes we describe may be universal, but nonetheless cultural, gender, and temperamental differences must be kept in mind.

Third, given these important emotional competence milestones and their possible positive outcomes, we move to the world of early childhood education, considering a system of practice that could incorporate this learning within an overall system. Such a system, it will be shown, necessitates consideration of how teachers as individuals promote preschoolers' emotional competence, how overall curricular programming may be useful, and what kinds of assessment may shed light on progress.

Thus, fourth, we move to considering how adults in children's environments can promote these competencies, first giving a summary of work with parents. However, given the focus of this volume, we discuss in more detail the small literature on how teachers can contribute to emotional competence development, via their socialization behaviors and their own emotional competence. Finally, we consider the current state of emotional competence programming and assessment as adjuncts to direct teacher socialization of emotion and make some conclusions and calls for future work.

In considering all these issues, we must be mindful of culture, context, gender, and individual children's temperaments as boundary conditions that must be kept in mind: does emotional competence "work" similarly for all groups, and do our notions of promoting it come as "one size fits all"? The answer is undoubtedly "no," but extant research has not yet fully explored these questions. The reader is referred to Garner, Mahatmya, Brown, and Vesely (2014; see also Chap. 5 by Huynh, Oakes, & Grossmann, this volume) for cogent consideration of these issues, which are unfortunately outside our scope here.

Defining Outcomes of Preschool Emotional Competence

Social Competence

Social competence can be broadly conceived of as effectiveness in interaction (Rose-Krasnor, 1997). Such successful interactions with others during early childhood often involve an emotional underpinning (Denham et al., 2003). For example, when children have to wait for their turn, they may become disruptive if they do not have the ability to regulate their disappointment. Thus, the extant literature often depicts emotional competence as a precursor for social competence (Denham et al., 2003; Denham & Grout, 1993; Garner & Estep, 2001; Izard et al., 2001). Traditionally, social competence has been operationalized through the examination of four factors: social skills (e.g., sharing, cooperation, respecting peer norms), peer status (e.g., popularity, acceptance, rejection), successful relationships (e.g., ability to form positive relationships), and social information processing (e.g., positive social goals). Evidence for the importance of emotional competence involves many of these aspects.

School Success

In our view, early school success includes both classroom adjustment and academic readiness as crucial outcomes for successful introduction to schooling. Classroom adjustment can be defined as young children's behaviors and attitudes associated with learning in the classroom environment, such as showing motivation to learn, persisting and paying attention, participating positively in classroom activities, and enjoying school. Young children's academic readiness is defined as mastery of certain basic skills, such as literacy, numeracy, and general knowledge, which help ensure success in the new formal learning environment (we use the term "academic success" when referring to outcomes later in schooling).

Components of Emotional Competence

Emotional Expressiveness

Emotional expressiveness, especially the recognition and sending of emotional messages, is central to emotional competence. Emotions must be expressed in keeping with one's goals, in accordance with the social context. Children need to coordinate the goals of self and of others, experiencing and expressing emotions in a way that is advantageous to moment-to-moment interaction and to relationships over time.

What, more specifically, does the expression of emotions “do” for a child and his/her social group? Most importantly, emotions provide social information signaling whether the child or other people need to modify or continue their goal-directed behavior (see Campos, Mumme, Kermoian, & Campos, 1994). An example is happiness: if one boy experiences happiness while playing in the “block corner” with another, he may seek out the other child during another activity and even ask his mother to arrange a playdate with the other child. The experience of joy gives him important information that affects his subsequent behavior. Peers benefit from witnessing other children’s expressions of emotion. Regarding information emotional expressiveness confers to others, witnesses to a girl’s anger likely know from experience whether their most profitable response would be to fight back or to retreat.

Thus, preschoolers are learning to use emotional communication to express non-verbal messages about a social situation or relationship – for example, giving a hug to express the emotion of tenderness. They are expressing all the “basic” emotions (e.g., happiness, sadness, anger, and fear) and also developing empathic involvement in others’ emotions – for example, kissing a baby sister when she falls down and bangs her knee. Further, they display complex social and self-conscious emotions, such as guilt, pride, shame, and contempt, in appropriate contexts. Finally, young children are beginning to realize that a person may feel a certain way “on the inside” but show a different visible demeanor. In particular, they are learning that the overt expression of socially disapproved feelings may be controlled, while more socially appropriate emotions are expressed – for example, one might feel afraid of an adult visitor but show no emotion or even a slight smile (Denham, 1998).

Additionally, enduring patterns of preschoolers’ emotional expressiveness become potent intrapersonal supports for, or roadblocks to, interacting with age-mates. Young children’s emotional styles contribute to their overall success in interacting with one’s peers. For example, an often sad or angry child, sitting on the sidelines of a group, with nothing pleasing her, is less able to see, let alone tend to, the emotional needs of others. Given this inability, her interactions may be less than effective; her emotions are hampering her social competence. It is no wonder when her peers flatly assert, “She hits. She bites. She kicked me this morning. I *don’t like* her.” Conversely, a generally happier preschooler is one who can better afford to respond positively to others, and her social interactions are likely to be more effective.

More specifically, positive emotion is important in the initiation and regulation of social exchanges. Sharing positive affect may further facilitate the formation of friendships and render one more likable (Denham, McKinley, Couchoud, & Holt, 1990; Park, Lay, & Ramsay, 1993; Sroufe, Schork, Motti, Lawroski, & LaFreniere, 1984). A child who displays more positive emotions, manifested by smiling and laughing, becomes an inviting beacon signaling “Come join me” to adults and classmates alike.

Negative affect, especially anger, can be quite problematic in social interaction (Denham et al., 1990; Lemerise & Dodge, 2008; Rubin & Clark, 1983; Rubin & Daniels-Byrness, 1983). Children who are able to balance their positive and negative emotions are rated higher by teachers on friendliness and assertiveness, and

lower on aggressiveness and sadness, respond more prosocially to peers' emotions, and are seen as more likable by their peers (Denham, 1986; Denham et al., 1990; Denham, Renwick, & Holt, 1991; Eisenberg et al., 1995; Eisenberg, Fabes, Murphy, et al., 1996; Sroufe et al., 1984; Strayer, 1980).

Outcomes of emotional expressiveness patterns have more recently garnered much empirical support in predicting later social competence and academic success. Results have generally corroborated and extended earlier findings on positive and negative expressiveness. For example, Shin and colleagues (2011; see also Garner & Waajid, 2008) found that positive emotional expressiveness during preschoolers' dyadic play was related to several indices of social competence, including peer acceptance, initiating peer interaction, receiving visual attention from peers, and ratings by teachers.

In terms of the deleterious outcomes of negative emotions, Taylor, Eisenberg, Van Schyndel, Eggum-Wilkins, and Spinrad (2014) found that children's observed and reported anger at age 2 ½ indirectly (via ego resiliency) *negatively* predicted social competence reported by parents and teachers at age 7. Examining slightly older children's emotions, Chang, Shelleby, Cheong, and Shaw (2012) found that anger at age 3½ was negatively related to teachers' assessment of social competence (assertion, cooperation, and self-control) at age 5. Finally, Locke, Davidson, Kalin, and Goldsmith (2009) found that context-inappropriate anger was related to preschoolers' self-rejection, loneliness, and negative peer and teacher social competence nominations. In short, enduring negative expressiveness can set about a cascade of equally negative social outcomes.

Attention is also being given to the contribution of emotional expressiveness styles to school success. Including more school-related outcomes, Denham, Bassett, Sirotkin, and Zinsser (2013) found that positive emotional engagement with an examiner was positively related to literacy outcomes. Presumably, positive emotional experience and expressiveness with adults stand one in good stead in the learning environment – they signal enjoyment and motivation to learn to self and others. Elaborating on contexts where young children may display positive emotions, Hernández et al. (2016) examined patterns of kindergartners' observed emotional expressiveness during free play in the classroom, as well as lunch and recess. Positive emotions were positively related to concurrent academic success (i.e., specific literacy skills, achievement, and school engagement), either directly or via relationships with teachers and peers. Conversely, Herndon, Bailey, Shewark, Denham, and Bassett (2013) found that preschoolers' negative emotionality (especially when dysregulated) was associated with lower levels of teachers' later reports on positive engagement and independent motivation in learning, especially for boys. Similarly, Denham, Bassett, Thayer, et al., (2012) also showed that patterns of preschoolers' negative expressiveness (predominantly anger) were related to lack of both current and later school adjustment, as well as kindergarten academic success. Examining more specific negative emotions, Valiente, Lemery-Chalfant, and Swanson (2010) found that adults' ratings of preschoolers' sadness, anger, and shyness were negatively related to academic achievement. In short, the emotional world of the preschool child has important implications for learning.

In summary, emotional competence in expression of emotions, especially in maintaining a positive emotional style, appears central to young children's concurrent and later positive outcomes in both social and academic realms. Educators could give consideration that at this young age, expression and *experience* of emotion are rather consonant and work to promote preschoolers' *experience* of positive emotion and ability to deal with negative emotions and their source.

Emotion Regulation

When intensity, duration, or other parameters of the experience and expression of emotion are “too much” or “too little” to meet goals and expectations of the child and/or social partners, emotion regulation is needed (Thompson, 1994). During preschool, emotion regulation becomes necessary because beginning to attend preschool or childcare is a particularly important transition that taxes young children's emotion regulatory skills. Preschoolers' attention is riveted on success with their friends in this context. Unlike adults, however, these newly important peers are neither skilled at negotiation nor very able to offer assistance in emotion regulation. At the same time, the social cost of emotional dysregulation is high with both teachers and peers. Because play with peers is replete with conflict, emotion regulation is often required; initiating, maintaining, and negotiating play, and earning acceptance, all require preschoolers to “keep the lid on” (Raver, Blackburn, Bancroft, & Torp, 1999). With the increasing complexity of young children's emotionality and the demands of their social world – with “so much going on” emotionally – some organized emotional gatekeeping must be cultivated.

Negative *or* positive emotions can need regulating, when they threaten to overwhelm or need to be amplified. Children learn to retain or enhance those emotions that are relevant and helpful, to attenuate those that are relevant but not helpful, and to dampen those that are irrelevant. These skills help them to experience more well-being and maintain satisfying relationships with others. For example, a little boy may know that showing too much anger will hurt his friend's feelings, but showing too *little* angry bravado with another (who is bullying) could make him more of a target.

Early in the preschool period, much of this self-management is biobehavioral (e.g., thumb-sucking) and is often supported by adults. For example, even though very upset when a younger playmate grabs all the toys, one can use the caregiver's assistance instead of immediately resorting to aggression. As children progress through this age period, they become able to regulate their emotions more independently because of increased cognitive ability and voluntary control of both their attention and their emotionality (Lewis, Stanger, & Sullivan, 1989; Lewis, Sullivan, & Vasen, 1987). They learn more successful strategies for emotion regulation during the preschool period (Gust, Koglin, & Petermann, 2014; Sala, Pons, & Molina, 2014).

Specifically, perhaps because of the converging social and cognitive pressures concomitant with learning and interacting, preschoolers gradually begin to use specific coping strategies for emotion regulation: problem-solving, support seeking, distancing, internalizing, externalizing, distraction, reframing or redefining the problem, cognitive “blunting,” and denial. Sala et al. (2014) have recently found that older children endorse more cognitive means of regulation (i.e., reframing and redefining).

Maternal and teacher reports of constructive modes of effective emotion regulatory coping are associated with success with peers and overall social effectiveness during the preschool years (Blair, Denham, Kochanoff, & Whipple, 2004; Denham, 1998; Denham et al., 2003; Denham, Blair, Schmidt, & DeMulder, 2002; Eisenberg et al., 1995; Spritz, Sandberg, Maher, & Zajdel, 2010). Other recent studies have examined preschoolers’ emotion regulation in real time. For example, observed happiness and engagement in a happy task (blowing bubbles), as well as *lack of* negative emotion and disengagement in a distress task, predicted children’s positive social behavior 6 months later (Morgan, Izard, & Hyde, 2014). Distraction and problem-solving strategies become useful and even predict later abilities. Children’s active emotion regulation (i.e., not passive or disruptive) when faced with a disappointing gift at age 5 predicted socially competent peer play at age 7 (Penela, Walker, Degnan, Fox, & Henderson, 2015).

Despite the growth demonstrated in these studies, emotion regulatory failure still occurs throughout the preschool period. Such emotion dysregulation is often associated with young children’s difficulties with aggression and compromised social competence (Blair et al., 2004; Chang et al., 2012; Duncombe, Havighurst, Holland, & Frankling, 2013; Miller, Gouley, Seifer, Dickstein, & Shields, 2004). Moreover, Cohen and Mendez (2009) found that for African American preschoolers of low socioeconomic (SES) status, emotional lability in the fall of an academic year was associated with consistently maladaptive and declining social competence.

Cognitive demands of the new preschool environment can also be emotionally challenging and call for emotion regulation. In this context, children have to regulate emotions while sharing materials, taking turns, getting in line, or concentrating on preliterate tasks (Raver, 2004). Thus, emotion regulation is also related to classroom adjustment, academic success, and other indices of school readiness (Bierman, Nix, Greenberg, Blair, & Domitrovich, 2008; Brophy-Herb, Zajicek-Farber, Bocknek, McKelvey, & Stansbury, 2013). Children less able to deal with negative emotions may not have personal resources to focus on learning, whereas those who can maintain a positive emotional tone might be able to remain positively engaged with classroom tasks (Denham et al., 2013; Graziano, Reavis, Keane, & Calkins, 2007; Herndon et al., 2013; Miller, Seifer, Stroud, Sheinkopf, & Dickstein, 2006; Shields et al., 2001; Trentacosta & Izard, 2007).

In summary, emotion regulation also supports social and school success. Along with and closely related to emotional expressiveness (Cole, Martin, & Dennis, 2004), this aspect of emotional competence should be a central focus of early childhood education. As already noted, teachers agree. Thus, early childhood educators

could give consideration to promoting emotion regulation, in the service of both social competence and amelioration of problem behaviors.

Emotion Knowledge

With respect to emotion knowledge, we know that young children are interested in emotions as early as age 2 years. In spontaneous conversations, young children talk about and reflect upon their own and others' feelings and discuss causes and consequences of their own and others' emotional experiences and expressiveness (Dunn, 1994). Such emotion knowledge yields information about emotional expressions and experience in self and others, as well as about events in the environment, and conveys crucial interpersonal information that can guide interaction. Inability to interpret emotions can make the classroom a confusing, overwhelming place, hindering classroom adjustment.

Most preschoolers can infer basic emotions from expressions or situations (Denham, 1986). They tend to have a better understanding of happy situations compared to those that evoke negative emotions (Denham & Couchoud, 1990; Fabes, Eisenberg, Nyman, & Michealieu, 1991). During the preschool period, children come to understand many aspects of the expression and situational elicitation of basic emotions. They gradually come to differentiate among the negative emotions of self and others – for example, realizing that one feels more sad than angry when receiving “time out” from one’s preschool teacher. They also become increasingly capable of using emotion language (Denham, Cook, & Zoller, 1992; Fabes, Eisenberg, McCormick, & Wilson, 1988) – for example, reminiscing about family sadness when a pet died.

Furthermore, young children begin to identify other peoples' emotions even when they may differ from their own – for example, knowing that father’s smile as he comes into the house means his workday was satisfactory, and he probably won’t yell tonight. Toward the end of this period, they begin to comprehend complex dimensions of emotional experiences, such as the possibility of simultaneous emotions (Denham, 1998). In sum, preschoolers across many cultures are becoming able to discern their own and others' emotional states, talk about them rather fluently, empathize with others' emotions, and understand dissemblance (Pons, Harris, & de Rosnay, 2004; Sawada, 1997; von Salisch & Janke, 2010).

Although there are developmental progressions in the various aspects of emotion knowledge, there are also marked individual differences in these developments. Children who apply their more substantial emotion knowledge in emotionally charged situations have contemporaneous and later advantages in peer interaction; they are more prosocially responsive to their peers and are rated as more socially skilled by teachers and more likable by their peers (Alonso-Alberca, Vergara, Fernández-Berrocal, Johnson, & Izard, 2012; Deneault & Ricard, 2013; Denham, 1986; Denham et al., 2003; Denham & Couchoud, 1991; Denham et al., 1990; Torres, Domitrovich, & Bierman, 2015; Izard et al., 2001; Garner & Waajid, 2008,

2012; Schultz, Izard, Ackerman, & Youngstrom, 2001; Sette, Bassett, Baumgardner, & Denham, 2015; Smith, 2001).

Why is this link found so robustly across decades of study and samples differing slightly in age and in socioeconomic makeup? The power of emotion knowledge appears substantial. Emotion knowledge allows a preschooler to react appropriately to others, whether calmly or sympathetically, bolstering social relationships. Interactions with such an emotionally knowledgeable agemate would likely be viewed as satisfying, rendering one more likable. For example, emotion knowledge may allow the preschooler to interact more successfully when a friend gets angry, and talking about one's own emotions can facilitate negotiating disputes with friends. Similarly, teachers are likely attuned to the behavioral evidence of such emotion knowledge – the use of emotion language, the sympathetic reaction – and will evaluate it positively. Conversely, lack of emotion knowledge puts the preschooler at risk for aggression (Denham et al., 2002; Denham, Blair, et al., 2002). In particular, misattributing anger when other emotions are more correct is related to peer rejection and boys' aggression (Schultz, Izard, & Ackerman, 2000).

Increasingly, researchers are also confirming a link between early academic success and young children's emotion knowledge (Denham, Bassett, Thayer, et al., 2012; Garner & Waajid, 2008, 2012; Izard et al., 2001; Leerkes, Paradise, O'Brien, Calkins, & Lange, 2008; Shields et al., 2001). For example, Leerkes et al. (2008) showed that emotion knowledge – but not emotion regulation – was related to preschoolers' pre-academic achievement, above and beyond the influence of gender, age, and various risk factors (see also Garner & Waajid, 2008). As well, Denham and colleagues' work (Bassett, Denham, Mincic, & Graling, 2012; Curby, Brown, Bassett, & Denham, 2015; Denham, Bassett, Way, et al., 2012) has shown that aspects of preschool emotion knowledge predict later preschool and kindergarten school adjustment and academic success. Nix, Domitrovich, Bierman, and Gill (2013) also showed that *growth* in emotion knowledge subsequent to the Head Start REDI curriculum predicted kindergarten reading achievement and engagement in school (see also Torres et al., 2015).

These findings on the contributions of preschool emotion knowledge to school success extend even further in time. For example, Rhoades, Warren, Domitrovich, and Greenberg (2011) found that preschool emotion knowledge predicted first grade academic achievement, mediated by kindergarten attentional abilities, even when a host of possible covariates were held constant. Similarly, Izard and colleagues have found evidence of a link between emotion knowledge and even later academic success in elementary school (Izard, 2002; Izard et al., 2001). Thus, it is evident that children's ability to understand emotions, especially in context, plays an important role in their concurrent and later academic success.

Like that with social competence, the link with school success bears consideration. Why would emotion knowledge contribute to school success? School success – being able to attend and cooperate, feeling good about school, remaining nonaggressive, and focusing on tasks – is carried out in a very social world. Understanding the potential barrage of one's own and others' emotions in the preschool classroom can make these socially centered tasks easier, in that interac-

tions are smoother and more personal resources are left for focus on more cognitive tasks.

Taken together, these findings suggest that the ability to understand emotions in the classroom facilitates positive social interactions and that a deficit in this ability can contribute to behavioral and learning problems. Again, this component of emotional competence begs for deep scrutiny by early childhood educators.

Pathways Among Components of Emotional Competence

As important as these relations are between each component of emotional competence and social competence or early school success, these components are also likely to support one another as an interrelated network (Eisenberg, Sadovsky, & Spinrad, 2005). In fact, all aspects of emotional competence work together to promote school success (Denham, Bassett, Mincic, et al., 2012).

Children who enter school with more positive profiles of emotional competence (i.e., are emotionally positive and regulated and understand emotions) are more likely to develop positive and supportive relationships with peers and teachers, participate more in the classroom, and achieve more through the early school years (see reports including multiple components of emotional competence; e.g., Garner & Waajid, 2008; Izard et al., 2001; Leerkes et al., 2008, Shields et al., 2001). Conversely, children who enter school with less positive profiles are more often rejected by peers, develop less supportive relationships with teachers, participate and enjoy school less, achieve at lower levels, and are possibly at risk for later school failure (Denham, Bassett, Thayer, et al., 2012; Herndon et al., 2013; Ladd, Birch, & Buhs, 1999; Raver & Knitzer, 2002).

In particular, as Cole et al. (2004) theorized and both Denham, Bassett, Mincic, et al. (2012) and Denham, Bassett, Thayer, et al. (2012) demonstrated, emotion regulation and expressiveness often operate in concert. Children with specific deficits – those who experience intense negative emotions and are unable to regulate their expressions of such emotion – are especially likely to suffer difficulties in social relationships (Contreras, Kerns, Weimer, Gentzler, & Tomich, 2000). In contrast, however, even children who are high in negative emotionality are buffered from peer status problems by good emotion regulation skills, which parents and caregivers can teach them (Eisenberg et al., 1995, Eisenberg, Fabes, Guthrie, et al., 1996; Eisenberg, Fabes, Murphy, et al., 1996, Eisenberg et al., 1997; Murphy, Eisenberg, Fabes, Shepard, & Guthrie, 1999). Emotion knowledge may also support positive and regulated emotional expressiveness in predicting peer- and teacher-rated social competence and school success (Denham, 1986; Denham, Bassett, Thayer, et al., 2012; Denham, Blair, et al., 2002).

In Denham, Bassett, Mincic and colleagues' study (2012), all these assertions were corroborated in person-centered analyses: 4-year-olds with more positive profiles of emotional expressiveness, emotion regulation, and emotion knowledge (along with more positive self-regulation and social problem-solving) did indeed

show greater school success as evaluated later that school year and in kindergarten. The children with lower emotion knowledge, as well as less positive emotional expressiveness and emotion regulation abilities, were at risk for deficits in later school success. This group was comprised of more boys and children living in poverty than the other two groups. Knowing person-centered views of emotional competence can be useful in determining the need to address these abilities in the classroom.

Indirect, mediational pathways are also possible. We would expect that the emotional competencies we consider more foundational might have, along with direct effects, indirect contributions to classroom adjustment and academic readiness via more overt behaviors. In one of the few studies examining how aspects of emotional competence may mediate one another in contributing to early school success, Denham, Bassett, Zinsser, and Wyatt (2014) found that emotionally negative/aggressive behavior mediated relations between aspects of emotion knowledge and both concurrent and later school adjustment.

In summary, the components of emotional competence do not operate in isolation. Children's profiles of all three components are what peers and adults experience during interaction and what supports learning. It follows that we must turn to means of promoting this "package" of skills.

Early Childhood Educational System of Practice

If emotional competence is so important both contemporaneously and across time in promoting well-being, as well as other vital aspects of social and school success, it is important to frame their place in a system of early childhood educational practice. Figure 6.1 depicts our notion of such a system. Age-appropriate developmental tasks are the substrate upon which specific emotional competence skills are demonstrated and developed. Standards are created emanating from these important competencies as road maps of what skills to look for, expect, and teach. Standards inform choice of assessment tools and vice versa. Both standards and assessment are useful in that they lead to instruction, which often leads to the need for further, regular assessment and revised standards, and can be supported by both professional development for teachers as emotion socializers and curriculum or less-structured, top-down programming (see Humphrey, 2013). Ultimately, we strive for growth in emotional competence skill(s). The rubric presented in Fig. 6.1 can inform how we situate preschoolers' emotional competence within early childhood education.

We have already defined the developmental tasks and components of emotional competence for this age period; next in our system of educational practice are standards. In the education world, standards define what students should know and be able to do. They can be useful as reference points for planning teaching and learning programs, supporting positive learning environments, and for assessing student progress.

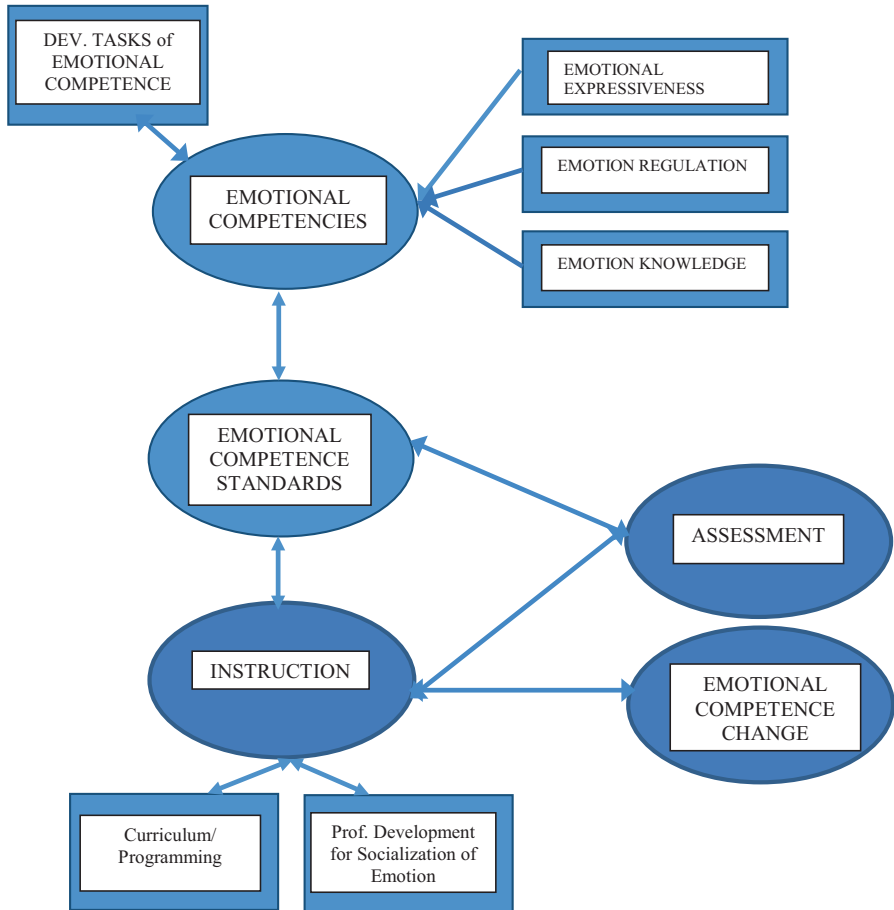


Fig. 6.1 Early childhood educational system of practice

Given that standards lead to both instruction and assessment, we now move to discuss socialization of emotional competence. Zinsser, Denham, and Curby (in press) offer a way to organize consideration of “social-emotional teaching,” via teacher socialization, teacher emotional competence, curriculum, and classroom climate – we address the first three in this chapter.

Socialization of Emotional Competence

All of the aforementioned components of emotional competence are, then, extremely important as foundations for young children’s social and academic success. How do preschoolers become emotionally competent or not? They do not develop these

competencies in a vacuum. In the social world of preschoolers, both parents and teachers/caregivers loom large as socializers, and both are likely to provide children experiences that promote or deter the development of emotional competence (e.g., both experience strong emotions during caregiving; Garner, 2010).

Parental Socialization of Emotion

We do know much about the contribution of *parental* socialization of emotion to their children's emotional competence (Denham, Bassett, & Wyatt, 2014; Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Eisenberg, Cumberland, & Spinrad, 1998) – their modeling of emotional expressiveness, reactions to children's emotions, and teaching about emotions. In brief, parents' generally positive emotional expression (with "safe" expression of negative emotions), encouraging reactions to children's emotions, and openness to and expertise in talking about emotions, all help their preschool-aged children to become emotionally competent. We now consider these aspects of socialization of emotion in turn.

Parental modeling Regarding modeling, parents' and children's positive emotional expression are significantly related (Isley, O'Neil, Clatfelter, & Parke, 1999). Conversely, when mothers are often angry and tense with them, young children are angrier and less emotionally positive (Denham, 1998; Newland & Crnic, 2011). Well-modulated negative emotion may, however, have positive effects (Denham & Grout, 1992).

Parents' emotions are also associated with children's emotion knowledge (Denham et al., 1997; Denham & Grout, 1993; Nixon & Watson, 2001). Positive expressiveness in the family seems to promote emotion knowledge, perhaps because positive feelings render children more open to learning and problem-solving. Conversely, exposure to parents' negative emotions can hamper young children's emotion knowledge by upsetting them and making it difficult for them to self-reflect about issues of emotion (Denham, 1998; Denham, Zoller, & Couchoud, 1994; Raver & Spagnola, 2002). Exposure to well-regulated negative emotion, however, also can be positively related to this aspect of emotional competence (Garner, Jones, & Miner, 1994).

Parental reactions In terms of reacting to children's emotions, mothers' supportive reactions to children's emotions – such as helping solve the problem, validating and encouraging free expression of emotion, and comforting or attending to the child's emotional needs – positively relate to preschoolers' expressiveness of positive emotions (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002) and emotion regulation (Spinrad, Stifter, Donelan-McCall, & Turner, 2004). In contrast, parents who employ unsupportive reactions to emotion – such as belittling and minimizing, or even punishing, the children's occasion of emotions – are more likely to have sadder, more fearful children (Berlin & Cassidy, 2003) and children with diminished

emotion regulatory abilities (Luebbe, Kiel, & Buss, 2011). At the same time, parents' supportive emotional reactions to their child's emotions may also help the child in differentiating emotions (Denham & Kochanoff, 2002; Denham et al., 1994; Fabes et al., 2002; Fabes, Leonard, Kupanoff, & Martin, 2001).

Parental teaching about emotions In its simplest form, teaching about emotion consists of verbally explaining an emotion and its relation to an observed event or expression. It is not surprising that adults' tendencies to discuss emotions, and the quality of their communications about emotions, if nested within a warm relationship, assist the child in expressing emotions. Further, such scaffolded teaching about emotions may help to direct children's attention to salient emotional cues, helping them understand social interactions and manage their own responses. At the same time, conversations with parents about emotions allow children to separate impulses from behavior, giving them reflective distance from feeling states themselves, and space in which to interpret and evaluate their feelings' causes and consequences – thus fostering both emotion knowledge and regulation (Brown & Dunn, 1992; Denham & Grout, 1992; Denham, Renwick-DeBardi, & Hewes, 1994; Dunn, Brown, Slomkowski, Tesla, & Youngblade, 1991; Dunn, Slomkowski, Donelan, & Herrera, 1995; Eisenberg et al., 1998; Garner, Dunsmore, & Southam-Gerrow, 2008). Furthermore, the general trend of these findings also holds true for low-income, minority families (Garner, 2006; Garner, Jones, Gaddy, & Rennie, 1997).

In sum, parental (mostly maternal) socialization of emotion – modeling, contingent reactions, and teaching – contributes much to all components of preschoolers' emotional competence (Denham et al., 2014). But what about the influence of teachers in the classroom? Their contribution could be extremely important, in the same or in new and different ways.

Teacher Socialization of Emotion

It follows that *teachers'* socialization of emotional competence will also promote social-emotional and even academic success in school. Preschool is rich in emotional experiences, and in this important context, young children learn about emotions through daily interactions with teachers. In addition, even when children are not directly involved in an interaction, they can learn about the emotional norms of their classroom through observing their teachers' socialization behaviors directed at others. Either directly, during interaction, or indirectly, via observation, preschoolers are experiencing teachers' expression and regulation of emotion, reactions to emotions, and teaching about emotions.

We do know that early childhood teachers are likely to engage in many of the emotion socialization behaviors previously observed in parents. This assertion derives from two circumstances. First, early childhood teachers spend significant amounts of time with children, performing emotion-laden caregiving tasks and providing emotional support. And second, teachers are trained to deal with emotion-

ally charged events and even have specific curricula giving them supports to address emotional development of their charges. Thus, although the contribution of early childhood educators' socialization of emotion may be different from that of parents due to the differential amounts of time spent together, and because of teachers' need to attend to an entire group of children and assume an instructive role, our and others' reasoning points to teachers as socializers of emotional competence. The small amount of early childhood education research that does exist indicates that preschool teachers are likely to engage in a wide variety of discrete emotion socialization behaviors in the classroom, parallel to parental emotion socialization behaviors (Ahn & Stifter, 2006; Ersay, 2007). In sum, preschool teachers are likely to be pivotal facilitators of children's emotional competence (Denham, Bassett, & Zinsser, 2012).

We know that some early childhood teachers are already intuitively aware of the importance of their own as well as children's emotions to learning and well-being and closely attend to these issues in the classroom (Zembylas, 2007; Zinsser, Denham, Curby, & Shewark, 2015; Zinsser, Shewark, Denham, & Curby, 2014). But preservice teachers report little training on developing emotional competence in students or managing their own internal feelings and external displays of emotion (Garner, 2010; see also Poulou, 2005), and relatively few schools of education are prepared to train teachers on these matters (Marlow & Inman, 2002). Moreover, there are individual differences in teachers' enactment of best practice in this area (Zinsser et al., 2014, 2015). However, encouraging research is emerging, suggesting that emotional competence concepts can be successfully infused in an undergraduate course on curriculum and instruction (Waaqid, Garner, & Owen, 2013).

Although, as already noted, teachers assert that lack of emotional competence hampers young children's development across many domains, we as yet lack a thorough understanding of how early childhood educators can individually promote such competence via mechanisms of emotion socialization, as well as their own emotional competence. That is, next to nothing has been published specifically about how *early childhood* educators promote such emotional competence via the aforementioned socialization of emotion behaviors (although interest is being piqued; e.g., Ahn & Stifter, 2006; Bellas, 2009; Reimer, 1997). Our own laboratory is analyzing a large dataset on how teacher socialization of emotion, both observed and self-reported, contributes to the growth of preschoolers' emotional competence. Greater understanding of teacher socialization of emotion in early childhood education could lead toward needed developments in teacher preservice/in-service training.

But what *do* we actually know about teacher socialization of emotion? Given the parent literature on how emotional competence is socialized, we can make informed predictions about the contributions of early childhood teacher socialization to young children's emotional competence. Further, although there is little extant data from the parent socialization of emotion literature, we also have expectations regarding direct contributions of teacher socialization of emotion to early school success. In general, we think it likely that teachers' generally positive emotions, accepting reactions to children's emotions, and active teaching about emotions (in conversa-

tions and via book reading) help children learn to express and manage emotions and learn about key qualities of the various emotions. Such socialization will also have direct and indirect (via children's emotional competence) links to children's early school success. We also think that teachers' own emotional competence is likely to be important.

Teachers' own emotional competence The ways in which teachers deal with their own emotional lives – perceiving emotions of self and others, using emotions to facilitate cognition and action, understanding emotions, and managing them – undoubtedly contribute to their socialization of pupils' emotional competence (Brackett & Katulak, 2006). For example, preschool teachers' emotional competence is related to their reactions to children's emotions. In Ersay's work (2015), preschool teachers with low awareness of their own emotions were less likely to self-report that they would help children label and regulate their emotions or to try to help solve the problem. In Ersay's earlier (2007) work, teachers low on emotional awareness more often ignored children's emotions and less often comforted children's negative emotions or matched their positive emotions. Further, teachers' reports of their own negative emotional intensity were associated with their punishing of children's emotions, and lack of attention to their own emotions was related to their greater minimization of children's emotions.

Given such circumstances, it would behoove us to consider training of teachers to become more emotionally competent themselves, as teaching can be an emotionally draining and unpredictable endeavor. Jennings and Greenberg (2009) suggested ways to promote teacher emotional competence, including mindfulness training, reflective supervision, stress reduction, and direct training (Brackett & Katulak, 2006; Emde, 2009). In fact, Kemeny et al. (2012) have shown that mindfulness training does promote teachers' own emotional competence, with lasting effect. More recent research on the preservice teacher training from the emotional intelligence framework is reviewed in Chap. 14 by Vesely-Maillefer and Saklofske (this volume).

Teacher modeling We expect that teachers' positive expressiveness would be positively related to all three components of children's emotional competence in the classroom (i.e., positive expressiveness, emotion regulation, and understanding of emotions). Specifically, teachers' positive emotionality would help children express and experience calmer, more regulated positivity themselves and render them receptive to learning about emotions in the new school environment. In contrast, intense teacher negativity would create an atmosphere where regulation is difficult. Mild teacher negativity might help children learn about emotions, but inexpressive teachers would not provide a welcoming platform for such learning. We would also expect more readiness to learn in classrooms where teachers are emotionally positive.

Despite these predictions, very little research has yet targeted expressive modeling by teachers. DeMorat (1998) did, however, examine a kindergarten teacher's emotions and four students' responses, over 3 months. The teacher most frequently

showed emotions of pride and happiness; students matched her interest and happiness. She showed pride to acknowledge student achievements and used happiness to encourage their good behavior. Ongoing results in our laboratory go further to suggest, for example, that when teachers in the USA and Italy show predominantly positive emotions, so do the children in their classrooms (Denham et al., 2016).

To promote emotional competence, teacher training could focus on helping teachers to be willing to show emotions, remain emotionally positive in the classroom despite challenges, and modulate understandable negative emotions (see Zinsser et al., 2014, 2015). Promotion of their emotional competence could be useful, increasing their abilities to accurately express emotions, generate positivity, reflect on, and manage emotions. Mindfulness techniques could help teachers maintain positivity, and reflective supervision could help teachers gain access to and understand their own emotions.

Teacher reactions We expect that teachers' supportive reactions to children's emotions would be positively related to children's positive expressiveness, ability to regulate emotions, and their emotion knowledge, with the converse being true for their punishing or minimizing reactions. Encouraging responses from teachers would assist children in both tolerating and regulating emotions, teaching them that emotions are moments for sharing and that emotions are manageable and even useful. Finally, supportive reactions would help children "stay in the moment" in order to learn more about emotions. Adaptive responses to children's emotions would also support their social competence and academic success.

Even very young children do notice teachers' reactions to their emotions. Dunn (1994) found that young children absorb not only content but also form and quality of teachers' emotional support during child care transitions. Ahn (2005; Ahn & Stifter, 2006) has described such contingent responding to children's emotions. In her work, teachers encouraged positive emotional expression and responded empathically (i.e., positively) to it. In responses to children's negative emotional expressions, teachers demonstrated empathy, physical comfort, distraction, problem-solving, ignoring, and negative responses such as restriction, threatening, ridicule, punishment, or minimization of children's expression.

Further, teacher responses to child emotions differed by child age. Toddlers' teachers were more encouraging and used physical comfort and distraction in response to children's negative emotions more often than preschool teachers, who relied more on verbal mediation. Early childhood teachers in this research were also very focused on having their students develop independent emotion regulation (Ahn, 2005; Ahn & Stifter, 2006; Reimer, 1997; see also Karalus, Herndon, Bassett, & Denham, 2016). Ahn's work cited above demonstrates that early childhood teachers do not validate children's negative emotion very often – one of the major tenets of emotion coaching. However, when they do validate that emotions are okay to feel and express, observers report greater prevalence of positive emotion and prosocial behaviors in the classroom (Karus et al., 2016).

To promote this aspect of socialization of emotion, teacher training could focus on ways of assisting teachers in valuing their supportive role concerning children's

emotions and give them specific strategies to use in reacting to children's more difficult emotions (e.g., anger, fear, sadness, even overexcitement). Promoting teachers' own emotional competence would likely assist them in utilizing emotional encounters more advantageously. Stress reduction could help teachers in their expression of positive reactions to children's emotions.

Teaching about emotions We expect that teachers' teaching about emotions would be positively related to children's positive expressiveness. Teachers who discuss emotions would help children feel better or figure out ways to do so and give them tools to use in expressing/regulating emotions. Via such direct tutelage, if not misleading or idiosyncratic, teachers also would help children acquire emotion knowledge. We also expect that children with teachers more willing and adept at teaching about emotions would be rated as more socially competent and ready to learn.

Ahn (2005) conducted qualitative observations of teachers' emotion-related discourse with children. Their emotion-related discussions in preschool classrooms, as opposed to toddlers', more frequently helped children infer causes of their negative emotions and taught them constructive ways of expressing negative emotion. Moreover, Kolmodin (2007) found individual differences in teachers' (not unlike parents') propensity to talk about emotions with preschoolers. Preschool teachers who value teaching children about emotions also promote more adaptive emotion regulation patterns in their students (Denham, Grant, & Hamada, 2002).

These values and propensities for emotion talk can translate into classroom practice. Several picture book-reading styles of preschool teachers have been identified, which relate positively to children's emotion knowledge (Bassett, Denham, Mohtasham, & Austin, 2016). For example, children whose teachers used more questions for explaining causes and consequences of characters' emotions (e.g., "Do you think she is sad because the ball fell in the river?") showed greater growth in emotion knowledge than those whose teachers did not use such questions. Moreover, teachers' use of explanation in a non-question form (e.g., "She is sad because the ball fell in the river") did not relate to preschoolers' emotion knowledge. In addition, teachers' use of strategies that support children's learning during a book-reading activity (e.g., involving children by asking questions, connecting a story to children's life, brainstorming about a story-related concept) promoted growth in children's emotion knowledge.

As well as classroom practices, promoting teachers' own emotional competence would likely contribute to their ability to perceive their own and others' emotions accurately, so that they could usefully talk about emotions with children. Use of reflective supervision could also aid teachers in giving them access to emotion vocabulary and increasing their ease in discussing feelings (Gilkerson, 2004). Further teacher training could focus on ways of helping teachers to value teacher-child emotion conversations and sustain such interchanges about emotions in classroom activities and dialogues about ongoing classroom interactions.

Summary What needs to be done? Much more research is absolutely needed, but the path is set. We have given examples from our own past and ongoing work, and others are beginning to take up the endeavor of studying socialization of emotion in the preschool classroom. Qualities of teachers' own emotional competence, as well as their emotional interactional behaviors with children, need much more scrutiny, but evidence on their importance is becoming established. We now turn from individual teachers to programming for the entire class, administered by teachers.

Programming to Promote Emotional Competence

There are several criteria for quality programming in emotional competence (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Individual lesson plans or activities need to be consistent in providing clear objectives and activities, as well as a clear rationale for their contribution to the overall program goals. There is nothing more sure to hamper the momentum of programming than a lesson or series of lessons that “don't make sense” to the teacher or parent.

Second, emotional competence skills must be reinforced through infusion throughout all teaching and by creating opportunities for skill application throughout the day and rewarding students for using their emotional competence in daily interactions. Effective programs also underscore the need for individualization of program goals.

Third, quality of program implementation must be assessed as it relates to emotional competence outcomes. Implementation assistance must exist in the form of formal training and technical support, as well as guidelines, procedures, and instruments for planning and monitoring program implementation. We need to be able to see whether programming is proceeding as expected, and if not, why – so that we may modify and improve our programming.

Furthermore, all the adults and all the environments, both proximal and distal, in a child's life must be involved in emotional competence programming, for the most positive, long-lasting results. This goal requires school-wide coordination and, ultimately, school-family and school-community partnerships (Payton et al., 2000). Given these criteria for quality programming, we would like to introduce three programs that specifically address emotional competence skills: Preschool PATHS, Incredible Years, and Emotion-Based Prevention programs. The first two programs were studied recently in large randomized clinical trials by the Head Start CARES project (Hsueh, Lowenstein, Morris, Mattera, & Bangser, 2014), and the third is included because it so centrally refers to emotional competence. All three programs have been evaluated for use with low-income preschoolers in particular. Other quality programs for more general social-emotional learning are reviewed in Zinsler et al. ([in press](#)).

Preschool PATHS

The Preschool PATHS curriculum is a younger extension of an effective elementary school program, Promoting Alternative Thinking Strategies (PATHS; Greenberg, Mihalic, & Kusché, 1998). This programming maximizes the environmental conditions that nurture and reward the development and application of skills of social-emotional learning (not only emotional competence but also social problem-solving and social behaviors).

The preschool version of PATHS delivers 30 “circle time” lessons to promote competences including giving compliments, understanding basic and advanced feelings, social problem-solving, and the “turtle technique” as a tool to promote emotion regulation. Thus, in terms of emotional competence, it aims to develop children’s awareness of their own and others’ emotions and teach emotion regulation. Crucial to the success of the PATHS curriculum is the training of teachers to use extension activities and integrate PATHS concepts throughout the preschool day. Children’s learning and use of newly acquired emotional skills are scaffolded by teachers throughout the day whenever they experience an emotional reaction or a challenging situation. In terms of evaluation, in one randomized trial, Preschool PATHS increased children’s emotion knowledge, social skills, social competence, and social independence and decreased social withdrawal, when compared to the control group (Domitrovich, Cortes, & Greenberg, 2007). Further, in the Head Start CARES evaluation, Preschool PATHS showed small to moderate improvements in children’s emotion knowledge, as well as their social problem-solving skills and social behaviors.

Incredible Years

The Incredible Years curriculum for preschoolers aims to reduce challenging behaviors in children by reinforcing programmatic themes both in school and at home. Target outcomes include more than emotional competence (e.g., social problem-solving, social behavior). Pertinent to our focus here, teacher training includes workshops on classroom management techniques and promoting children’s prosocial behavior, and children receive training emphasizing empathy, emotional literacy, social problem-solving, and self-control (see also <http://www.incredibleyears.com>).

Posttests immediately following the conclusion of the program (Webster-Stratton, Reid, & Hammond, 2004) have shown program-specific improvements in child conduct problems at home and at school and improvements in social competence with peers. Working with a sample of preschoolers at risk for antisocial behavior, Brotman et al. (2005) found improvements in children’s engaging behaviors in the treatment group. Finally, Webster-Stratton, Jamila Reid, and Stoolmiller (2008) used a quasi-experimental design with random assignment of Head Start students

and found improvements in teaching style, children's school readiness, and positive classroom atmosphere, along with positive changes in children's problem-solving skills. Thus, perhaps because of the broad focus of Incredible Years, its outcomes in emotional competence were not highlighted until the Head Start CARES evaluation, which found improvements in children's emotion knowledge, as well as social problem-solving skills and social behaviors. Incredible Years did not produce expected impacts on children's problem behavior and self-regulation, except for the highest-risk children.

Emotion-Based Prevention for Head Start Children

The Emotion-Based Prevention (EBP) program for Head Start children (Izard et al., 2008; Izard, Trentacosta, King, & Mostow, 2004) uses differential emotions theory to teach preschool-aged children how to understand, regulate, and utilize emotions appropriately (i.e., effective and constructive use of emotion motivation, as when modulated, vicarious sadness promotes sympathy). EBP uses puppets, vignettes, storybooks, and interactive reading to help structure children's learning. Unique to this program is the substantial focus on the four "basic" emotions: happiness, sadness, anger, and fear, as well as its reliance on the intrinsic rewards associated with greater emotional competence (Izard et al., 2008).

This program was first tested by Izard and colleagues in rural Head Start centers (Izard et al., 2004), and then a second study using inner city Head Starts reevaluated the program after some adaptations were made based on previous results. Both studies used randomized controlled trials of the EBP program, and the second study added the comparison of EBP to the established treatment program, I Can Problem Solve (Shure, 1993). Results of the two studies were drawn from teacher reports, direct child assessments, and independent observations and showed that EBP increased emotion knowledge and regulation in participating children when compared to the control groups. Additionally, EBP had beneficial impacts on positive social behaviors and on maladaptive and aggressive behaviors.

Summary

In general, it appears that there are a few programs with useful evidence on their capacity to enhance preschoolers' emotional competence. Continued evaluation research would of course be useful, but teachers can utilize some of this programming with confidence. A large caveat for any such statement is that program implementation must be assessed as adequate with fidelity to the program's goals and methodologies. However, given good programming, teachers will want to know where students stand on emotional competencies. This need leads us to discuss assessment.

Assessment of Early Childhood Emotional Competence

“What’s measured gets treasured” – if we assess early childhood social-emotional learning well, we can make better decisions about how to facilitate children’s functioning (Denham, 2006). Emotional competence assessment can highlight specific needs of children and classrooms in terms of programming and show overall effects of programming (Denham, Ji, & Hamre, 2010; Denham, Wyatt, Bassett, Echeverria, & Knox, 2009). Given the significance of emotional competence to positive development, and the multiplicity of skills within its components, we suggest a battery of measures based on emotional competence theory (e.g., Denham, 1998).

Any measure to be included in such a battery must meet standards for inclusion (Denham et al., 2009; Kendziora, Weissberg, Ji, & Dusenbury, 2011). Using quality assessment tools helps to ensure that we make better decisions about how to facilitate children’s emotional competence. Most broadly, measures used must be appropriate, with detailed manuals that allow for such a determination. Assessment tools must yield information that is necessary and developmentally grounded while minimizing (as much as possible) teacher, parent, and child time, effort, and attention (Raver & Zigler, 2004). Otherwise, assessments are not useful. Assessment should be integrated with curricula, beneficial to all parties, often based on ongoing teacher observation, primarily reliant on the child’s everyday activities, and pertinent to all learning and developmental domains. Resultant data, however, should *not* be used for high-stakes accountability decisions, such as kindergarten retention, but rather to understand individual children’s strengths and weaknesses, to inform individualized instruction, and to evaluate programming (Copple & Bredekamp, 2009).

Several more detailed criteria are paramount. First, qualities of the actual assessment tool must be considered. Psychometric properties must be excellent; assessment tools should have at least adequate reliability and validity and as far as possible should be fair, unbiased, and generalizable across ages and demographic groups. Second, we must think about utility; it is helpful for assessments to have benchmarks or external anchors, such as norms and/or standards, to assist in meaningful interpretations of scores and their change over time, to be useful in tracking the results of instruction and programming. Also in terms of utility, such tools should be administrable within a reasonable time frame (e.g., 10–20 min). Electronic administration and scoring can be desirable because it is faster and less expensive than paper-based administration and hand-scoring. All of these criteria regarding utility are reflected in cost: costs of assessment tools in terms of completion time, skill and equipment required, test forms, and/or scoring must be reasonable. Third, where possible, multiple informants of the same dimension’s measurement are recommended, given that behavior is often rater- and context-specific, and to ward off problems of bias.

Finally, any measurement of children should be guided by two principles: (1) purposefulness, in which the measure is designed or selected based on the goals for its use (such as to assess a child’s functional capacities or to evaluate program out-

comes), and (2) systematicity, in which assessments are only given in a context of care and educational support that can constructively use the data to promote optimal development. Thus, we need to have a good reason *why* we are assessing young children, and we need to have a system in place to *use* the resultant information.

In searching for a useful battery of emotional competence assessment tools, we reviewed sources such as Denham et al. (2010) and Humphrey et al. (2011); content validity required focus upon emotional competencies. Next, we reviewed all the aforementioned criteria, eliminating many measures with less adequate psychometric properties, lack of manuals, and lengthy administration, for example. In what follows, we give a very truncated tour of the product of this search, including measures that apply specifically to the components of emotional competence. Our selections include several that can be completed by teachers and/or parents and one observational tool (see also Campbell et al., 2016, for a critical review of social-emotional measures).

Measures of Emotional Expressiveness

Three rating scales and an observational tool are recommended for general use. Specifically, the Rothbart family of temperament scales, which includes the Early Childhood Behavior Questionnaire (ECBQ; Putnam, Gartstein, & Rothbart, 2006) and the Children's Behavior Questionnaire (CBQ; Rothbart, Ahadi, Hershey, & Fisher, 2001); the Social Competence and Behavior Evaluation, 30-item scale (SCBE-30; LaFreniere & Dumas, 1996); and the Social Skills Improvement System (SSIS; Elliott & Gresham, 1993) appear promising as rating scales. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) could also be utilized if further adapted for use by parents and teachers. The Minnesota Preschool Affect Checklist-Revised and Shortened (MPAC-R/S; Denham, Bassett, Thayer, et al., 2012) is recommended as an observational tool, given that teacher training for the computerized measure is under development. No direct assessment of children's emotional expressiveness is available; however, some progress on this front is currently underway (Fettig, Howarth, Watanabe, Denham, & Bassett, n.d.). Considering the criteria established here, several suggestions should be made. To meet the need of brevity, selected scales of the Rothbart measures or the CBQ-VSF (very short form) would need to be used, and there is evidence that the MPAC-R/S could capture emotional expressiveness with briefer observation than currently stipulated (e.g., two 5-min epochs). Some elements of necessary documentation, as in a rubric explanation of measure items to improve raters' comprehension of each item, could be improved for the CBQ and SCBE-30 (for MPAC-R/S documentation see Denham, Bassett, Thayer, et al., 2012). Norms exist, including for diverse populations, for all these measures, although more research on culture fairness would be useful.

Measures of Emotion Regulation

In our review of available rating scales, the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997) is the most promising rating measure of emotion regulation. The ERC's psychometric properties range from moderate to adequate and, given the short amount of time required to administer, the ERC demonstrates utility, although its documentation is sparse and norms and evaluation of fair usage with diverse samples are still needed. Thus, there are clear gaps necessitating research and expansion of both parent- and teacher-report ratings systems to assess young children's emotion regulation. Further, although the MPAC-R/S has emotion regulation items, it could be desirable to have an observational instrument even more clearly focused on emotion regulation. As with emotional expressiveness, direct assessments are not yet ready for applied usage.

Measures of Emotion Knowledge

The Affect Knowledge Test-Short Version (AKT-S; Denham, Bassett, Brown, Way, & Steed, 2015) utilizes puppets to measure preschoolers' developmentally appropriate understanding of emotional expressions and situations and has recently been computerized utilizing videos matching the race and gender of the child. Recent changes (e.g., shortening) render it more useful for educational purposes (see Denham, et al., 2010, for evidence on the earlier version). The AKT-S shows good psychometric properties, with appropriate documentation, as well as parallel versions that could be used for multiple assessment points. However, its norms should be published and culture fairness explored further.

Although there are currently only direct assessments of preschoolers' emotion knowledge, it remains unclear whether parent and teacher reports could ever garner a level of detail on this aspect of emotional competence, due to the amount of inference required. Research supporting development of other means of assessing preschool emotion knowledge would be valuable.

Battery Usage

Given the healthy, albeit finite, number of measures previously described, parents and teachers do have a variety of assessment tools with which to try to capture children's emotional competence. When deciding what to use, we suggest that early childhood educators and parents consider assessments targeting each component of emotional competence (Copple & Bredekamp, 2009). Furthermore, assessors

should aim for the most practical, which is often also the most efficient, method for data collection, using measures that are, cumulatively, the least taxing. Thus, a battery consisting of the MPAC-R/S, the CBQ (and the CBQ-VSF), the SCBE-30, the ERC, and the AKT-S, when fully administered together, will allow professionals to collect data on emotional expression, emotion regulation, and emotion knowledge, the three cornerstones of emotional competence. Full battery administration will also provide a multi-method approach to assessment, allowing for a more comprehensive profile of the child's social-emotional competencies, as each tool provides a unique perspective.

Situations may call for only a single facet to be addressed. In such a case, a careful review of the tools comprising our proposed battery should provide practitioners a guide as to what would best meet their needs. Although a few of the measures proposed require some administration training in their current state (e.g., MPAC--R/S, AKT-S), the arrival of specifically targeted teacher- and parent-friendly computerized assessments (currently under development) should reduce prerequisite training to a minimum without overburdening assessors cognitively or financially.

In sum, we consider the mentioned battery to be a useful beginning for assessing emotional competence in preschoolers while attending to the criteria enumerated (Campbell et al., 2016). Continued refinement and consideration of new tools as they become available is of course necessary.

Summary and Conclusions

In this chapter, we have considered the importance of preschoolers' emotional competence and reviewed evidence of how it facilitates both their social competence and school success, often longitudinally. Within an educational system of practice, we then considered how educational standards, teacher socialization of emotion, and assessment can work synergistically to promote these competencies. Much more consideration of teachers' own emotional competence and their means of socializing young children's emotional competence is sorely needed at this point, alongside integration of this knowledge with current standards, programming, and assessment. This is a challenge for the field that cannot be overlooked.

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Chapter 7

Building Emotionally Intelligent Schools: From Preschool to High School and Beyond



Jessica D. Hoffmann, Zorana Ivcevic, and Marc A. Brackett

Abstract Despite best attempts, the idea of “leaving your emotions at the door” denies decades of research on the function of emotions. When schools embrace and support the emotions of their students and educators, they create a climate where people feel secure, appreciated, and inspired. The ability-based theory of emotional intelligence maintains that the skills of perceiving, using, understanding, and regulating emotions can be improved through instruction and practice. As consensus builds that we must teach “the whole child,” social and emotional learning (SEL) becomes more integrated into our schools, and emotionally intelligent teaching practices become the norm. In this chapter, we briefly outline the need for SEL in schools, then share implementation strategies and current research on one evidence-based approach to SEL, RULER, developed at the Yale Center for Emotional Intelligence. RULER is a setting-level SEL program, which posits that by changing the climate of the classroom, youth outcomes will also improve, including academic engagement and achievement, as well as relationships among students and adults. We then describe adaptations of RULER for high school, preschool, and families. Example activities and lesson ideas for integrating SEL into all aspects of school life are provided throughout.

Imagine a middle school science teacher who uses the concept of boiling points and freezing points to teach her class about differences in energy or activation levels among emotions like happy, excited, and ecstatic. Imagine a preschool teacher who uses transition time to help children learn new feeling words to help get their needs met. Imagine a high school where conflict resolution involves the explicit teaching of perspective taking and emotion regulation strategies such as mindfulness and positive self-talk. As social and emotional learning (SEL) becomes more integrated into our schools, these teaching practices are becoming the norm. In this chapter, we briefly outline the need for SEL in schools, then share implementation strategies and current research on one evidence-based approach to SEL, RULER, developed

J. D. Hoffmann (✉) · Z. Ivcevic · M. A. Brackett
Yale Center for Emotional Intelligence, Yale University, New Haven, CT, USA
e-mail: Jessica.hoffmann@yale.edu; zorana.ivcevic@yale.edu; marc.brackett@yale.edu

at the Yale Center for Emotional Intelligence (Brackett & Rivers, 2014). We then describe adaptations of the RULER approach for high school, preschool, and families.

Emotions Matter

Despite best attempts, the idea of “leaving your emotions at the door” denies decades of research on the function of emotions. Students come to school anxious about an upcoming test, excited about a sporting event after school, or fuming about a conflict at home. Educators are also arriving at school with their own feelings. To ignore students’ and educators’ emotions and attempt to focus solely on academic content is futile. Rather, by striving to meet the social and emotional needs of their students and educators, schools can help everyone to achieve their full potential.

There is a growing consensus from parents and community leaders that we want to educate “the whole child” (Elias, 2006; see also Chap. 12 by Elias, Nayman, & Duffell, this volume). Of course, we want schools to help students succeed academically in reading, math, science, and social studies; however, we also want to develop a generation of citizens who are creative problem solvers, socially adept, compassionate, and prepared for the future. To do this, more and more schools are turning to SEL in order to systematically instruct children in emotion and interpersonal skills.

The SEL Framework

The Collaborative for Academic, Social, and Emotional Learning (CASEL, 2013) defines SEL as “the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (p. 4). CASEL (2013) identifies the following essential competencies for academic learning and SEL: identifying feelings, being responsible, recognizing strengths, managing emotions, understanding situations, setting goals and plans, solving problems creatively, showing empathy, respecting others, appreciating diversity, communicating effectively, building relationships, negotiating fairly, refusing provocations, seeking help, and acting ethically. By definition, an SEL program integrates the teaching of emotional skills, such as identifying, labeling, and regulating emotions, in the traditional curriculum of reading, writing, and arithmetic (Brackett & Rivers, 2014). By helping students to be caring, responsible, self-regulated, and pro-social, SEL programs also play a role in supporting children’s school readiness and academic success (Denham & Brown, 2010; see also Chap. 6 by Denham & Bassett, this volume).

Scholars suggest that non-cognitive skills (e.g., social skills, emotion regulation, persistence) are the best investment for adult productivity by fostering motivation, perseverance, and self-control (Heckman & Masterov, 2007). Research backs up this assertion. A meta-analysis of over 200 controlled studies evaluating the outcomes of school-based SEL programs showed that schools that had adopted an SEL program (as compared to schools that did not) had increased levels of academic achievement, relationship quality, emotional skills, and fewer problem behaviors (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). CASEL (2013, 2015) has endorsed several specific SEL programs at the preschool, elementary, middle, and high school levels, based on their rigorous design, availability of implementation supports, and empirical evidence of positive impact on students' academic performance and/or behavioral outcomes. Among these is the RULER approach, which will be described in more detail throughout this chapter.

Among other CASEL-endorsed programs is the Promoting Alternative Thinking Strategies (PATHS) program for preschool and elementary schools, which includes lessons in self-control, problem solving, and emotional awareness (Greenberg, Kusche, Cook, & Quamma, 1995). The elementary school PATHS has been shown to improve children's emotion vocabulary and emotional understanding (Greenberg et al., 1995), as well as increase children's inhibitory control and verbal fluency, while decreasing problem behaviors (Riggs, Greenberg, Kusche, & Pentz, 2006). The preschool PATHS has also been shown to increase preschoolers' emotion knowledge and improve their social skills and behaviors (see Chap. 6 by Denham & Bassett, this volume). Similarly, the Responsive Classroom (RC) approach developed by the Northeast Foundation for Children (NEFC, 1997) integrates social, emotional, and academic learning through classroom practices aimed to promote learning and create classrooms where children are "safe, challenged, and joyful." RC includes classroom practices and school-wide, family, and community connections. Elementary school students who received RC reported more positive feelings toward learning, their teachers, and their peers (Brock, Nishida, Chiong, Grimm, & Rimm-Kaufman, 2008), and teachers practicing RC reported increased collaboration among each other and more positive perceptions of the school (Sawyer & Rimm-Kaufman, 2007). A more recent review of these and other evidence-based SEL programs can be found in the *Handbook of Social and Emotional Learning* (Durlak, Domitrovich, Weissberg, & Gullotta, 2015).

Although the research findings on the effects of SEL programs are promising, the impact of any given SEL program depends on how well it is implemented (Durlak et al., 2011). SEL programs have the greatest chance of success when they are backed by all levels of the school district, including superintendents, principals, and teachers, and when the SEL program of choice is based in sound psychological and education theory and scientifically tested in the field (Brackett & Katulak, 2007; Elias et al., 1997; Zins, Weissberg, Wang, & Walberg, 2004). However, bringing SEL into a school or district is challenging. The challenges include training teachers and administrators, providing content to students, achieving district buy-in, providing ongoing support, and conducting assessments and research.

In this chapter, we describe our vision for an emotionally intelligent school that is grounded in the ability-based theory of emotional intelligence (Mayer & Salovey, 1997; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume). We then provide an overview of our flagship SEL program, RULER, developed at the Yale Center for Emotional Intelligence, and discuss keys to successful implementation at the K-8 level. Finally, we discuss how we are expanding our SEL programming to pre-schools and high schools as well as to families and communities. For each section we discuss the need, key strategies for successful implementation, and offer a brief overview of research to date, as well as real-life examples and applications.

Emotional Intelligence (EI)

Ability EI Theory

Before describing an emotionally intelligent school, we should first define emotional intelligence (EI). Here, we focus on the ability model of EI, which proposes that there are four fundamental and interrelated emotion abilities or branches: (1) perception and expression of emotion, (2) use of emotion to facilitate thinking, (3) understanding of emotions, and (4) management of emotion in oneself and others (Mayer & Salovey, 1997). Together, the four abilities of EI promote better quality relationships, health, and academic and work performance (Brackett, Rivers, & Salovey, 2011; Brackett & Salovey, 2004; Mayer, Salovey, & Caruso, 2004). We will discuss each of the four branches in more detail, with a focus on children and the school context.

The first ability – recognition and expression of emotions – includes accurately reading facial expressions, body language, vocal tone, and one’s own physiological responses (e.g., racing heartbeat, feeling hot), as well as being able to recognize emotions in other stimuli such as paintings, stories, or music (Mayer, DiPaolo, & Salovey, 1990). Recognizing the occurrence of an emotion conveys information that something important is happening in the environment and allows for behaving in effective and socially appropriate ways (Brackett & Rivers, 2014). A student who can tell when she is getting frustrated can more quickly move to manage that frustration or ask for help. A student who misperceives aggression in others may get into more fights than a student who can accurately read others. Similarly, a smiling teacher conveys that he is pleasant and approachable, while a frowning teacher with arms crossed displays cues that he should be avoided.

The second ability – using emotions to facilitate thinking – refers to purposefully using how one is feeling, or deliberately generating an emotion, to guide one’s attention, make decisions, or think creatively. For example, research has shown that pleasant, high-energy moods such as happiness or exuberance are useful for generating creative ideas (e.g., Baas, De Dreu, & Nijstad, 2008). Therefore, a teacher might use this knowledge to plan a brainstorming activity for after recess when she

knows the students will be arriving in a high energy, positive state. Alternatively, a student facing a creative writing assignment may purposefully listen to upbeat music before starting her work to help her shift into the mood most conducive to original thinking. On a more basic level, we can listen to our emotions when making decisions, sometimes referred to as “listening to our gut.” For example, a teacher who feels bored teaching a lesson can be fairly certain the students will also likely be bored with the content and choose to adapt the lesson or transition early.

The third ability – understanding emotions – encompasses recognizing both the causes and consequences of how we feel and being able to assign a specific label to the experience (using “feeling words”; e.g., content, irritated, devastated). This ability also refers to the knowledge of how basic emotions combine into more complex emotions (e.g., the combination of anger and disgust into contempt), or change from one feeling to another (e.g., from anticipation to disappointment), and how different emotions influence thinking and attention, decision-making, and subsequent behavior. A student who understands that his anxiety is due to an upcoming test, and that studying and preparation reduce that anxiety, is able to make better choices to regulate his/her stress.

The final skill – management or regulation of emotions – includes the ability to be open to one’s feelings and employ effective strategies to manage the thoughts, feelings, and behaviors related to an emotional experience (Eisenberg, Fabes, Guthrie, & Reiser, 2000; Mayer & Salovey, 1995). Brackett et al. (2011) outline five emotion regulation goals (creating the acronym PRIME): (1) *preventing* an emotion, such as avoiding test anxiety; (2) *reducing* an emotion, such as lessening our frustration; (3) *initiating* a new emotion, such as when a teacher tries to motivate or inspire her classroom; (4) *maintaining* a feeling (e.g., staying relaxed); and (5) *enhancing* a desired emotion (e.g., increasing joy by sharing exciting news with others). There is a variety of effective emotion regulation strategies available depending on the goal, including both cognitive (e.g., visualization, positive reappraisal) and behavioral (e.g., taking a walk, meditation) strategies. Students benefit from knowing and flexibly using a range of strategies depending on the context, as well as knowing and avoiding strategies that may be ineffective or even harmful in the long run (Peña-Sarrionandia, Mikolajczak, & Gross, 2015).

Ability EI Research

EI models are either ability-based or “mixed,” with the latter combining abilities with dispositional qualities such as optimism and persistence (Brackett & Mayer, 2003; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006; Mayer et al., 2000; Roberts, Zeidner, & Matthews, 2002). Our approach to teaching EI is anchored in the ability-based model of EI. By defining EI as a set of skills or abilities, such as the recognition and regulation of emotion that can be measured through performance-based tests, we can ensure that new skills are taught, and students are able to do

something they were not able to do before, such as increase their emotion vocabulary (e.g., understand the difference between envy and jealousy or between worried and overwhelmed).

Research has shown that EI skills have a positive impact on relationships and personal well-being, and the impact of ability EI has been shown to exist beyond the effects of personality and general intelligence (Brackett & Katulak, 2007; Brackett & Mayer, 2003). Emotions also underlie the ability to succeed in school. Emotions drive attention (Ohman, Flykt, & Esteves, 2001), and attention is key to memory and learning; anxious and angry students will likely have difficulty concentrating compared to their calm and happy peers. While teachers may not be able to reduce the environmental, personal, or family factors that are causing students to enter their classrooms with unwanted or unpleasant emotions, they can be part of the solution through the teaching of emotional skills. Students who can regulate their emotions (reducing anxiety, increasing curiosity) will be better able to focus and learn. Indeed, children with higher EI abilities have higher academic achievement than students with lower EI abilities (Ivcevic & Brackett, 2014; Marquez, Martin, & Brackett, 2006; Rivers et al., 2012).

Ability EI has been linked to positive social outcomes as well. In a study of 273 fifth and sixth graders, students with higher EI abilities had fewer externalizing, internalizing, school, and behavioral problems, as rated by their teachers. These ratings included lower scores on hyperactivity, aggression, conduct problems, anxiety, depression, attention and learning problems, and overall problem behavior (Rivers et al., 2012). Preschool children with higher EI skills also tend to be more socially appropriate at preschool and upon entering kindergarten, as measured by sociometric likeability and teacher ratings (Denham et al., 2003; see also Chap. 6 by Denham & Bassett, this volume). Male college students with low ability to perceive emotions and use emotions to facilitate thinking had higher rates of illegal drug and alcohol use, deviant behavior, and poor relationships with friends, than male students with higher EI abilities (Brackett, Mayer, & Warner, 2004). Deficits in EI skills have also been linked with alcohol and tobacco use in early adolescence (Trinidad & Johnson, 2002), and social deviance in college students, even after controlling for personality and verbal intelligence (Brackett & Mayer, 2003). In K-12 school settings, lower EI abilities may manifest as a student who misperceives aggression in others and, consequently, gets into more interpersonal conflicts, or a child who feels sad at school due to her home life, but does not possess the regulation strategies to improve her mood, and instead withdraws from her supports.

Helping students develop stronger EI skills should help to mitigate many of these unwanted outcomes. One of the most direct ways that an SEL program can affect students' lives is by giving them the language and abilities to communicate how they are feeling (Brackett & Katulak, 2007). When a student can accurately recognize, appropriately express, and explain how they are feeling, they are likely to receive more support and develop stronger relationships. Next, we use the RULER approach as an example to discuss the specific, measurable EI skills that can be targeted by an SEL program.

The RULER Approach to SEL

The goal of RULER is to create emotionally intelligent schools and districts. RULER is the acronym for: Recognizing, Understanding, Labeling, Expressing, and Regulating emotions. Note that the acronym is not meant to suggest a hierarchy of skills, where one precedes the next; rather, the skills are interrelated, where improvement in one would likely influence another (Brackett & Rivers, 2014).

The RULER skills are anchored in the ability theory of EI, and they elaborate on the four branches of the Mayer and Salovey (1997) model. RULER stresses the skill of labeling emotions, which refers to making connections between an emotional experience and emotion words. Students and teachers can develop their emotion vocabulary, adding nuanced words to feeling “angry” such as feeling peeved, irritated, or outraged. The more feeling words a person knows, the more accurately they can label their emotions, communicate how they are feeling to others, and understand how others are feeling. Students who can label feelings accurately have more positive social interactions and perform better at school, while students who struggle to label emotions have more behavioral and learning difficulties (Rivers et al., 2012).

Expressing and regulating emotions are also emphasized in RULER. Expressing emotion refers to knowing when and how to show one’s emotional experience taking into account one’s social context. Unspoken rules about how to display feelings vary across contexts and can be culturally specific (see Chap. 5 by Huynh, Oakes, & Grossmann, this volume). For example, Underwood, Coie, and Herbsman (1992) found that with regard to expressing anger, school-age students reported more display rules when around teachers than peers, and girls reported more masking of anger than boys. While there is some universality in how emotions are expressed, it is important to note that there are also individual differences in how people express their feelings (Matsumoto et al., 2008); while one angry student may fume at his desk with furrowed brow and arms crossed, another may throw things or have a tantrum. Regulating emotion pertains to the thoughts and actions youth use to feel more, less, or the same amount of an emotion. Helping children develop a full range of strategies to deal with downregulating (e.g., decreasing stress), upregulating (e.g., increasing optimism), and maintaining an emotion (e.g., accepting sadness) is a key element in RULER.

RULER Anchor Tools

RULER offers four Anchor Tools: the Charter, the Mood Meter, the Meta-Moment, and the Blueprint, which schools can learn, individualize, and integrate into the school day. For each of the Anchor Tools, we briefly discuss its use with examples from K-12 schools.

The Charter The Charter is built on the premise that to build a warm, welcoming, and safe climate for learning, all members of a classroom, grade, or school should

agree on how they wish to feel at school. The Charter is a document created by a group (e.g., students in a class, school leadership team) that answers three questions: (1) how students want to feel at school (i.e., labeling), (2) what they can do to help each other feel that way (i.e., understanding), and (3) what they can do to problem solve in case of conflict (i.e., regulating). For example, one high school in New York City chose the words happy, excited, motivated, energized, comfortable, relaxed, confident, proud, appreciated, and interested. Then, specific and measurable ways of achieving these goals are discussed. For example, students might feel the desired way when they greet each other by name with a smile each morning or when students use active listening (including eye contact, nodding, and follow-up questions). Lastly, students discuss steps that can be taken if they feel the Charter has been violated, such as talking directly with the person who has done something upsetting, rather than talking behind their back or asking for a third person or adult to act as moderator.

The overall goal of the Charter is to set a positive tone for students, rather than creating a list of rules replete with “don’ts.” Charters can be completed in each classroom, for each grade, or for an entire school. Teachers, administrators, and other staff are also strongly encouraged to make and uphold their own Charter. The Charter is generally written out on a poster, decorated, and signed by the students. Schools are encouraged to display the Charter in a prominent place to remind students and faculty of their emotion-related goals. The Charter is considered a living document that is reviewed and revised as needed. For example, a classroom Charter created at the beginning of the school year might be revisited and amended around different holidays and used to make New Year’s resolutions. The Charter process allows for much individualization and creativity; some schools have turned their Charters into songs, while others elect on a regular basis “Charter Champions” who have stood out as students who have exemplified the Charter goals over a period of time.

The Mood Meter The Mood Meter is a tool to help teachers and students become aware of their emotions and recognize how their emotions affect their thinking, motivation, and decisions. The Mood Meter is a figure created by an intersection of two axes describing major properties of emotions: valence and activation/energy. The horizontal (valence) axis ranges from unpleasant at the far left, to pleasant at the far right, with neutral in the middle. The vertical axis (energy) ranges from low energy at the bottom to high energy at the top. The two axes create four quadrants, each including different families of emotions. The bottom right quadrant (low energy, pleasant feelings) includes emotions like calm, content, and relaxed. The top right quadrant (high energy, pleasant feelings) includes emotions like happy, proud, and exuberant. The bottom left quadrant (low energy, unpleasant) includes sadness, boredom, or disappointment. Finally, the top left quadrant (high energy, unpleasant) houses two families of emotions: anxiety, nervousness, and fear, as well as anger, irritability, and fury. Each quadrant of the Mood Meter is depicted with a color (red, blue, yellow, and green) commonly associated with a corresponding group of emotions, and a grid from +5 to -5 superimposed over it (see Fig. 7.1).

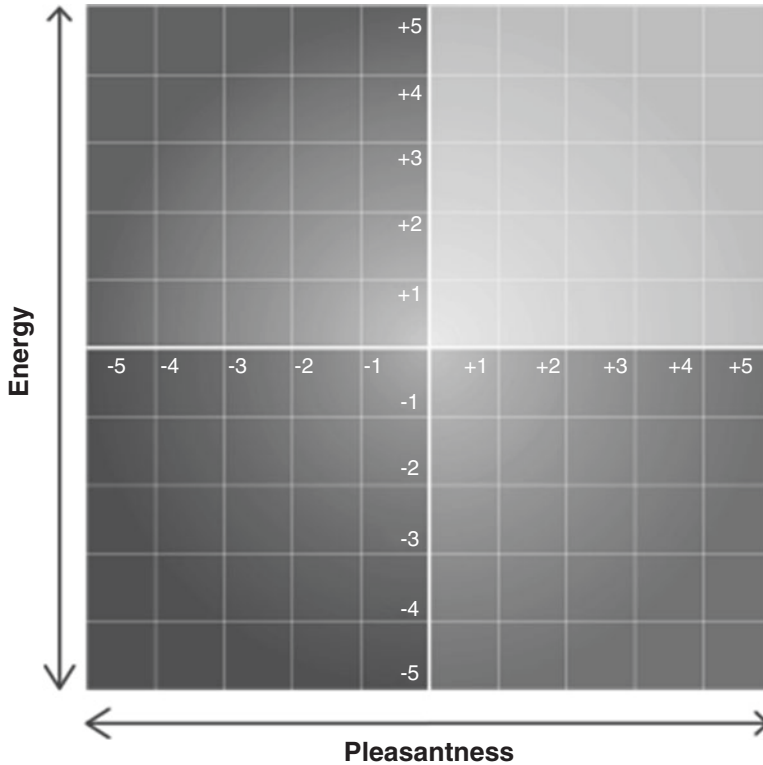


Fig. 7.1 The Mood Meter

Being able to discuss how classroom members – both students and teachers – are feeling is a crucial step toward creating an emotionally intelligent school. The Mood Meter helps with emotion recognition because it breaks the emotional experience into more easily perceived components: valence and energy. Students can more easily determine whether they feel pleasant or unpleasant and whether they feel activated or not, rather than immediately verbalizing the most suitable feeling word for their experience. Once they have determined what quadrant of the Mood Meter they are in, it becomes easier to then identify an appropriate label for their specific feeling.

The Mood Meter can be used in many ways. For example, teachers can ask students to check in on a Mood Meter displayed in their classroom before the start of a lesson. This gives teachers a chance to offer support to those students reporting unpleasant and unwanted feelings and to teach emotion regulation strategies that shift students into a mood conducive to learning. Students can also use the Mood Meter throughout the day, for example, charting how they feel before each class on their schedule to get a sense of how often they are feeling different emotions or which classes typically elicit pleasant or unpleasant feelings. A student who realizes that they are feeling frustrated most of the time in science class is part way to

resolving the problem just by having this insight. Some schools have created “mini Mood Meters” that students carry with them or attach to the back of their student IDs so that students always have one available.

The Meta-Moment The Meta-Moment is a tool for building emotion regulation skills. It works by teaching the person to expand the space between an emotion trigger and how one reacts or responds. By creating more time to think in between an event and a reaction, students and teachers are able to make better choices and employ effective regulation strategies. The Meta-Moment is presented as a process in which an event happens that causes a person to feel a certain way. Perhaps a classmate bumps into a student in a crowded hall between classes and triggers anger. The Meta-Moment teaches students to stop their automatic reaction. In a moment between the trigger and their reaction, students are asked to picture their “best self.” Rather than pushing back or yelling, the student would take a moment to think about the person they aspire to be and the reputation they desire to have. In elementary schools, students often draw a picture of their best selves, while older students may reflect or write about their “best self” aspirations. Students then consider how to respond in an effective and appropriate way (e.g., taking the other student’s perspective, reframing an event as an accident). In addition to the classroom use, the Meta-Moment has also been successfully used by adults, such as when educators prepare for meetings with parents that may be emotionally charged, handling student or parent conflict, or getting along with challenging co-workers.

The Blueprint The Blueprint serves as a powerful tool to help students and teachers inject empathy and perspective taking into conflict resolution. The Blueprint offers questions that serve as a guide in reaching emotional understanding and addressing an emotionally charged situation. For example, the Blueprint could be used to handle a past confrontation between two students over a group project or an upcoming meeting between a frustrated parent and the principal. The Blueprint questions guiding problem solving are: (1) How may/was each person feel/feeling? (2) What may/were you and the other person think/thinking as a result of these feelings? (3) What may cause/caused each person to feel the way s/he does/did? and (4) What may/did you and the other person do to manage these feelings? When the Blueprint is used after a conflict occurred, participants also reflect on the event and write a plan for how the situation could have been handled more successfully.

Creating an Emotionally Intelligent School

An emotionally intelligent school is much more than a school with an SEL program; it is a school with a distinct way of life and a commitment to continual improvement in both students’ and educators’ emotional development. Students enter school with a wide range of EI abilities, stemming from their exposure to adult role models or explicit teaching of emotional skills, such as perception of emotions in others (Strayer & Roberts, 2004; Zhou et al., 2002). These discrepancies may manifest as

differences in students' ability to control their behavior, pay attention and concentrate, and build and maintain relationships with peers, all of which affect academic learning. When schools adopt an SEL program, they can begin to decrease these discrepancies between students and develop an emotionally skilled student and teacher body.

In this next section, several broad strategies are proposed as key to the successful creation of an emotionally intelligent school. By no means is this section comprehensive; the focus is on several take-home points apparent after decades of research and field experience in hundreds of schools using RULER. The lessons learned are applicable to any quality SEL program that a school may choose.

“All Stakeholders”

CASEL advocates that quality SEL programs need a comprehensive and systematic approach that includes training for all stakeholders involved in students' educational experience (see Chap. 12 by Elias et al., this volume). By developing their own EI skills first, teachers and school staff become more effective at teaching students about emotions and how to manage them. Teachers, who are adept at regulating their own emotions report positive effects on their teaching, including not only the regulation of unpleasant emotions, such as controlling anger, but also the regulation of pleasant feelings such as waiting for a private moment to praise an individual student (Sutton & Wheatley, 2003). Improving the EI skills of teachers is one way to create more emotionally intelligent classrooms and schools, which should lead to more productive learning (Brackett & Katulak, 2007; Jennings & Frank, 2015; Schonert-Reichl, Hanson-Peterson, & Hymel, 2015; see also Chap. 14 by Vesely-Maillefer & Saklofske, this volume).

RULER training begins with adult stakeholders participating in professional development and program training to develop EI skills in themselves so they can be better equipped to practice and model EI in the classroom. This training includes principals and the school leadership team, teachers, custodians, bus drivers, and anyone else who contributes to the school climate or overall school culture. RULER is taught to students only after the adults become fluent in the concepts of EI and the RULER tools (Brackett & Rivers, 2014).

Full Integration

For an SEL curriculum to have significant impact, SEL must be viewed as an integrated part of the curriculum and school culture. The goal is for educators to leave professional development workshops on EI not only inspired but also confident about implementing what they have learned. To achieve this, RULER tools are integrated slowly, with a focus on fidelity.

Moreover, as program developers we are always helping schools find a way to make SEL fit into the school's current vision, mission, and programming, and when necessary, provide supports and coaching to ensure successful program implementation.

SEL can be incorporated easily into nearly all content areas, including language arts, social studies, science, math, and physical education. Here, we provide several examples where schools have incorporated RULER lessons into existing classroom lessons. The skills of EI, for example, are relatively easy to incorporate into language arts, when teachers assign books, engage students in discussions about a characters' emotions, and even in role-plays where students practice handling interpersonal conflicts in more emotionally intelligent ways. Recognition of emotion can be taught by first engaging a class in a discussion about how people use their voices, bodies, and faces to convey feelings and then having students make collages using magazine clippings. The collages can be shared with the class, leading to discussions or reflective writing on family and cultural differences or the importance of nonverbal cues. One creative writing activity for the Mood Meter is to have students write acrostic poems for a feeling word, where the feeling word is written vertically and each line of the poem describes the feeling, for example, for the word calm, C, Cool and collected; A, A small smile; L, Laid-back; and M, Mozart music. RULER skills can also be incorporated into math and science or social studies classes. For example, one science teacher taught variations in energy level among feeling words of the same family (e.g., irritated, annoyed, angry, irate, enraged) during a lesson about freezing points and boiling points. In a social studies class, feeling words such as alienation and isolation have been taught during lessons on the Holocaust and other major wartime events.

By incorporating emotion lessons seamlessly into the existing curriculum, two outcomes are achieved. First, the likelihood that teachers will implement the programming increases, as they see how it can fit into their subject. Since the programming is not an additional class, or an additional set of lessons, the school as a whole has less trouble finding time. Secondly, integration of SEL into typical school subjects gives students actual examples of how emotions impact all areas of our lives, increasing the likelihood that they will generalize what they learn beyond the classroom. For more detailed information on the training and rollout steps of RULER, see Brackett and Rivers (2014).

Research Evidence

RULER is a setting-level SEL program, which posits that when students and educators regularly use EI skills in everyday interactions, this improves the emotional climate of the classroom, which, together with improved individual skills, leads to improved student outcomes, including student engagement, academic performance, and relationships among students and adults (Nathanson, Rivers, Flynn, & Brackett, 2016). As one of the evidence-based SEL programs endorsed by CASEL (2013), RULER's theory of change has shown empirical support for both individual

(i.e., social-emotional functioning, academic performance) and environmental outcomes (i.e., classroom climate, student-teacher interactions). For example, a quasi-experimental study of 15 fifth- and sixth-grade classrooms, half of which implemented RULER for one academic year, found that students in the RULER classrooms had significantly higher end-of-year grades on their report cards and improved social skills and school behaviors as rated by their teachers, compared to students in the comparison classrooms (Brackett, Rivers, Reyes, & Salovey, 2012). In another quasi-experimental study of 47 Spanish public school teachers, teachers who received RULER training reported significantly higher levels of work engagement and better quality of teacher-student interactions at post-training, even after controlling for age, gender, and personality, compared to teachers who received non-SEL training (Castillo, Fernández-Berrocal, & Brackett, 2013). There is also evidence that the amount of RULER training teachers receive and the quality with which they implement RULER lessons are positively linked to enhanced student outcomes (Reyes, Brackett, Rivers, Elbertson, & Salovey, 2012).

The impact of RULER on classroom emotional climate and quality of instructional support was recently tested in a 2-year randomized controlled trial with 155 fifth- and sixth-grade classrooms in 62 schools, where half of the schools were randomly assigned to implement RULER and the other half served as comparison schools with a standard curriculum (Hagelskamp, Brackett, Rivers, & Salovey, 2013; Rivers, Brackett, Reyes, Elbertson, & Salovey, 2013). Classroom emotional climate and quality of instructional support were assessed with observational ratings of classroom video footage. At the end of the first year of the trial, classrooms in RULER schools were rated as having more positive emotional climates, characterized by greater warmth and connectedness between teachers and students, teacher support for more autonomy and leadership in the students, and teachers who were more focused on students' interests and motivations (Rivers, Brackett, et al., 2013). These changes in emotional climate were maintained at the end of the second year of the trial and were further followed by improvements in the quality of instructional support for students' academic learning (Hagelskamp et al., 2013). These findings provide compelling support for the RULER approach in creating learning environments that support students' social, emotional, and academic development.

Emotionally Intelligent High Schools

Adolescence is the age of opportunity (Steinberg, 2014). Adolescence is a time of growth, from development of abstract thinking to identity exploration. There are currently 15 million students in 9th through 12th grade in the USA who could benefit from strategies for understanding and managing emotions. Feelings of tiredness, boredom, and disengagement in school are common (Lyons, 2004), and adolescence is also a time of heightened impulsiveness and engagement in risky behaviors (Eaton et al., 2008). Increasing adolescents' EI skills could both help them in their

high school years, as well as create the psychological resources they need to successfully transition to college and the workforce.

There are substantial challenges in implementing an SEL program in high school. Creating an emotionally intelligent high school is not as simple as taking a successful middle school program and bumping up the vocabulary to the next level (e.g., from lonely to isolated or from mad to enraged). The concerns and topic areas of interest to high school students are different than those of younger students. Students move to an environment that expects more autonomy and has a firmer academic focus with less individualized emotional support. High school is also the first time that students' grades and behaviors begin to significantly impact their opportunities for the future (e.g., college, career). Recent reports indicate that 20% of students who enter high school do not graduate within 4 years (Stetser & Stillwell, 2014), and more than 40% of African American and Latino males drop out (Holzman, Jackson, & Beaudry, 2012). Goals of a high school SEL program should therefore include welcoming and retaining the students, in addition to the goals of creating a safe and supportive school climate and preparing students for success in college or the workforce.

Incorporating SEL into high school provides the opportunity to address many subjects that are relevant to teenagers but are not commonly included in a traditional curriculum. For example, students benefit from guidance in formulating a vision for their future and planning measurable, realistic steps toward their goals. As students prepare to graduate and become largely independent, lessons on conflict resolution and self-advocacy become increasingly relevant. We offer below several developmentally appropriate adaptations of RULER for the high school students.

Grade-Wide or School-Wide Activities

The Charter Because students change classrooms for different subjects, grade-level or even school-wide Charters, rather than classroom Charters, are recommended. For some schools, it is possible to have an assembly in which all students meet to complete the Charter steps – describing how they want to feel, identifying behaviors to help them feel that way, and listing strategies for conflict resolution. However, large schools may elect to have smaller groups first consider the three Charter questions before working for grade-wide or school-wide consensus. For example, individual classrooms, such as each student's language arts class or each student's advisory course, would first complete the three Charter steps as smaller groups. Then, a representative from each group would come together, forming a Charter Committee, to finalize the grade- and school-wide Charters.

Student-Led Activities One major difference between K-8 and high school is that high school students have more capacity to guide their own learning and to take an active role in how SEL is integrated into their school community. While an elementary school teacher decides the content of a lesson for her students with a top-down approach, high school students can be given more agency. There are several

major benefits to supporting high school students in project-based learning tasks. Student-led projects present real-world challenges, giving them a sense of authenticity and meaning (Thomas, 2000). Moreover, students have the opportunity to build valuable skills and experiences through such projects (e.g., public speaking, co-founding a club or group, event planning, website design, video production, and community outreach).

A recently developed resource that supports high school teachers in integrating SEL and puts students in the driver's seat of their own SEL education is inspirED, an online community created through a collaboration between the Yale Center for Emotional Intelligence and Facebook (www.inspired.facebook.com). The community contains resources based on the latest research about SEL and school climate. The online space provides a way for students, educators, and SEL experts to connect and share best practices, ask for advice, discuss challenges, and share ideas. The site provides activities, lessons, articles, projects, and videos. In collaboration with leaders and educators at their school, students are empowered to create inspirED teams. Students participating in inspirED teams have the opportunity to help assess their school's climate, identify what changes are needed, develop and implement a plan of action, and track their school's success.

Adolescent-Relevant Modules

Students' concerns quickly change as they move from the 9th to the 12th grade. An emotionally intelligent school will be responsive to these changing concerns. Ninth-grade students are adjusting to the new and higher demands of high school, 11th-grade students start to plan for what comes after high school (e.g., make college choices and prepare applications), and 12th-grade students prepare for a transition to college or a career. To address these diverse needs, we recommend that schools include an advisory or elective course on social-emotional health. The Freshman Experience is a 20-lesson course we developed for incoming ninth-grade students. The lessons cover the four RULER Anchor Tools (Charter, Mood Meter, Meta-Moment, and Blueprint) through experiential learning, role-playing, and use of videos. The presentation of the tools is more sophisticated than at the K-8 level. For example, when learning about the Mood Meter, the focus is heavily on regulation strategies for moving from one family of emotions to another (e.g., moving from angry to peaceful, from anxious to calm, from resigned to inspired) and building students' toolbox of regulation techniques (e.g., visualization, listening to music, journaling, practicing mindfulness). Students are also encouraged to use the Meta-Moment and Blueprint proactively, before a problem occurs, such as when anticipating an interaction that has the potential to be emotionally charged. The goal is for students to show increased ability to use the tools independently.

To address students' changing concerns and their increasing focus on developing their potential for college or a career, we developed advanced modules for RULER high school. The modules are aimed at sophomores and juniors and cover a range of

topics relevant to the social and emotional health of adolescents. In addition to RULER skills (recognizing, understanding, labeling, expressing, and regulating), the lessons focus on creating a (relatively) long-term vision for one's high school and college experience and exploring topics relevant to realizing this vision, such as goal setting or understanding personality traits and how they interact with managing emotions. There is a stronger focus on self-discovery, personal development, life-long learning, and the malleable nature of the self and one's skill set.

The course starts with a unit on creating a vision or asking students to engage in a prospection exercise about their future. Where do they see themselves in one or two years? Who are they with? What are they doing? Across several sessions, students then outline SMART (specific, measurable, achievable, relevant, and time-bound) goals. This helps to guide students away from overly general statements like "work more on math" toward more specific ones, such as to practice math problems for 30 minutes a day after school and 1 hour over the weekend. Once goals are in place, students work on action planning, which is identifying concrete strategies for achieving their goal and vision. Teachers often provide their own personal examples to help students with this process. For example, one teacher shared that his vision was to be more physically fit; his SMART goal was to be able to run the 5 K Thanksgiving Day race in his hometown in less than 30 minutes; and his strategy would be to run for 45 minutes on the treadmill, 4 days per week. Students revisit their vision and the goals to evaluate progress or to revise and adapt them as needed.

In other units, students learn about personality traits. They take a personality assessment and discuss how their personality traits may impact their goals. For example, an introverted student whose goal is to run for student body president may need to begin developing additional skills such as leadership training and confidence with public speaking and networking. Similarly, students learn about motivation where different kinds of students' needs can facilitate or impede their vision. A student who has a strong need for achievement is more likely to be successful as a small business owner where they can have much influence over each step of the decision-making process, rather than working in a large corporation with well-established rules and procedures where they may have influence over only a small part of the process.

RULER high school is presented to students in a class format, such as an advisory course or during an elective time slot. It includes 20 lessons per grade, and schools are encouraged to personalize the lessons for their student population. The lessons are highly interactive to be more engaging to students. Following the principle of developing skills in both students and educators, teachers receive course-specific training, as well as training in EI skills and online coaching sessions.

Emotionally Intelligent Preschools

There is growing societal awareness that early education is critical for later success; however, there is a great variation in how early childhood education programs address children's social and emotional needs (Pianta, Barnett, Burchinal, &

Thornburg, 2009). Rivers, Tominey, O’Byron, and Brackett (2013) point out that high preschool expulsion rates alone are indicators of a problem. Teachers need effective strategies for helping young children to develop emotional skills and manage their emotions more effectively to prevent and reduce problem behaviors in the classroom. The extension of SEL programs, like RULER, to the preschool level provides educators with such skills (for review of other preschool SEL programs, see Chap. 6 by Denham & Bassett, this volume).

Preschool is the best time to begin building children’s EI. Preschool is a time of developmental “firsts,” from playing with other children who are not siblings or family to adjusting to a classroom schedule where transitions between activities are imposed rather than chosen. Children are expected to learn and comply with new demands, including cooperation and sharing, inhibition of impulses, sustaining attention, working autonomously at times, shifting activities, and maintaining positive relationships with others. Children learn to regulate their emotions while interacting with others who may make them frustrated, excited, or sad. While adjusting to school life, children begin to express their emotions verbally and start developing the ability to discern the emotions of others (Denham, 1998; Saarni, 1990). Yet, a national survey of kindergarten teachers found that at least half of their students lacked the social skills necessary for the classroom (Rimm-Kaufman, Pianta, & Cox, 2000).

Preschool is often a child’s first exposure to a classroom setting and plays a major role in setting him or her up for success in elementary school. First, children need to successfully master certain emotional and social goals to prepare for kindergarten (e.g., naming feelings, recognizing the feelings of others). This finding points to the need for more effective SEL programming for preschoolers. Secondly, preschool teachers have the opportunity to create supportive classrooms and show new students that school is a safe and supportive environment and that teachers are caring adults.

High-Quality Implementation

Educators’ own emotional skills are a crucial element of program success at all developmental stages. At the preschool level, educational requirements vary widely and are less standardized than for teachers at the primary or secondary school levels (Pianta et al., 2009), so some additional consideration in what teachers will need to be prepared to teach SEL may be necessary. To provide training in emotional skills for preschool teachers, Rivers, Tominey, et al. (2013) suggest multisensory teaching techniques, including videos, role-playing, hands-on experiences, and small group discussions. Evaluations conducted at teaching trainings have found such strategies to successfully engage the teachers and achieve buy-in for the adoption of preschool RULER.

SEL can be incorporated into all aspects of the preschool classroom, from group or circle time to transitions, pretend play, art, and music. Incorporating music and movement into group activities at the preschool level has been shown to foster child engagement (Tominey & McClelland, 2013). For example, students can play a

freeze dance game where they copy their teacher's emotional facial expression each time the music stops. Alternatively, students can dance in a manner representing different moods such as first dancing in a sad way, slowly, or with droopy limbs and then dancing in an excited way, at a faster pace with jumping and skipping. Morning circle is also a great opportunity for students to identify their feelings on the Mood Meter and for classrooms to think together about the day ahead and how students want to feel.

Preschool classrooms can be mixed age, including children as young as 2 years and 9 months to children over 5 years old who are headed to kindergarten. Teachers handle this challenge by having some group time followed by learning centers where children can explore and learn at their own developmental level with support from the teachers. When it comes to social and emotional instruction, such as with preschool RULER, one of the major ways to differentiate instruction is through the kinds of questions teachers ask. For example, when students "check-in" on the Mood Meter in the morning, younger students may be asked to show on their face how they are feeling (smiling, frowning), while older students are asked to verbalize a feeling word and say why they are feeling that way.

Similar differentiation of instruction can be achieved with other classroom lessons, including reading a book. The classroom might first read a book about two children who fight over a toy, accidentally break the toy, and then repair the toy and their relationship. Any number of follow-up activities could then take place, including students' role-play sharing a toy bunny, drawing pictures of their favorite stuffed animals, or telling about something that makes them angry. Here, the conversation is the key to integrating RULER skills. Teachers can ask developmentally appropriate questions about how characters are feeling or the causes and consequences of those feelings, teach new feeling words or the appropriate expression of those emotions, and present possibilities for regulating unwanted feelings (e.g., frustration) or maintaining wanted feelings (e.g., pride).

RULER gives teachers a different way of thinking about their classroom. Imagine the difference between the example above, in which students role-play sharing the toy bunny with help and discussion about their emotions from the teacher, versus a classroom that provides toy bunnies in the pretend play area for children to play with following reading the story. While both scenarios involve the same materials and both include reading and play, the former has an emotionally intelligent approach, with the aim of teaching EI skills and the belief that they can be improved through practice.

Empirical Benefits of Preschool SEL

Some may ask, how much EI can a preschooler really learn? The short answer is: "A lot!" Evaluation studies show significant skill gains in preschool children exposed to SEL. For example, positive outcomes associated with the preschool PATHS include improved emotion knowledge, greater social competence as rated by

parents and teachers, and less social withdrawal, compared to controls (Domitrovich, Cortes, & Greenberg, 2007). Incredible Years Training Series similarly shows improved social competence, emotional self-regulation, and reduced conduct problems for preschool students, as well as an increase in teachers' use of positive classroom management strategies (Webster-Stratton, Reid, & Stoolmiller, 2008; see also Chap. 6 by Denham & Bassett, this volume).

In a sample of 156 preschoolers across 16 classrooms at 3 centers using preschool RULER, children ages 3–5 were better able to use the Mood Meter by mid-year and showed gains in their abilities to label emotions and to recognize emotions (Rivers et al., 2016). These analyses controlled for child age, gender, and whether the child was assessed in Spanish or English. Furthermore, preschool RULER was designed with continuity in mind, such that children are learning basic skills and emotion vocabulary that prepares them for the elementary school model of RULER.

Emotional Intelligence for Families

One major challenge for any SEL program is that students begin to apply what they have learned at school to all aspects of their lives, including home. When children use RULER language at home, miscommunications can happen. For instance, a child can say, “Mom, I am feeling in the red,” referring to the red quadrant of the Mood Meter that includes high activation unpleasant emotions such as anger or anxiety. This mother, if not familiar with the Mood Meter, would not understand what her child is feeling. Such interactions can make families feel disconnected from their child's school or concerned about what their child is learning. We next present several important reasons for schools to extend their SEL programming to families and then provide suggestions on how we have done this successfully with RULER for families.

Including Families in SEL Programming

What are the added benefits of including students' families in an SEL program? We begin the section with several reasons why schools are encouraged to spread emotionally intelligent practices beyond the classrooms and into the community. First, students are learning a new language and a new way of thinking about themselves and others. Terms like the Mood Meter or the Meta-Moment and the “best self” become everyday words for students. Developing a shared language means that teachers and families can work together to help students further their EI skills. Practice at home augments what is learned at school and makes it clear that EI skills are useful across different contexts. When schools and families agree on educational goals, they are better able to counteract competing information from media or peers that could compromise the effectiveness of both systems for socialization (Hansen, 1986). Similarly, Sheridan (1997) found that students' academic, social, and

behavioral performance is best when both home and school interventions are used, in contrast to school-only or parent-only.

A second reason to include parents is the issue of trust. It is important that families understand what is being taught at their children's school and that they are comfortable voicing concerns. The quality of the relationship between family and school relates to student achievement and behavior (Patrikakou & Weissberg, 1999) and to the level of parent trust (Adams & Christenson, 2000). It is crucial that families feel informed, especially when it comes to content that may be unexpected in the classroom, such as SEL. Including families in the learning process decreases any feelings of alienation that could potentially be experienced.

The inclusion of families in creating an emotionally intelligent school can strengthen parental involvement in a school (e.g., through Parent-Teacher Association meetings, providing the school building as a community space). Training parents has the added benefit of allowing schools to get to know families on a deeper level, which can lead to additional parental engagement with the school. For families struggling with accurately identifying feelings and managing them, teaching EI skills to everyone benefits the whole family. Children are likely to feel more respected when their families realize and acknowledge their emotions and can model reacting in highly emotional situations according to their best selves. Families can also meet each other and provide support around similar areas of interest, such as sharing strategies for handling sibling rivalry, homework completion, or bedtime routines.

How to Involve Families

The first consideration in involving families is logistics. Where will families meet? It may be that the school building is not the best choice and that a community center or a community church might be a more welcoming setting. How can families be contacted? It is important to consider who in the community is doing the child rearing and what means of communication are the most effective, including email, flyers, or letters sent home from school, and whether English or another language is most appropriate. Schools know their populations and communities best and should provide materials that allow for flexibility and for each school to make the program its own. For example, one way that RULER provides such materials is through the Internet (ei.yale.edu), which offers resources such as newsletter templates, handouts and worksheets, and suggestions for family activities, which schools can customize for their individual communities. RULER for families also delivers material through morning and evening workshop events that cover EI, RULER skills, and Anchor Tools, as well as "hot topics" such as sibling rivalry, homework, and bedtime.

Promotional materials for family workshop events are well received when they come from the school and people whom the families already know and trust. To help schools, customizable promotional materials, such as flyers, letters, posters, and email scripts, can be provided. However, school leaders will have the best insight into how to approach families at their school, and some approaches will be rather unconventional. For example, in one school, school leaders organized a karaoke

night during which all the songs were emotion-themed. As families sang, an animated and constructive discussion ensued about how emotions are an integral part of life, from relationships to learning. Through a both memorable and enjoyable event, families received the message that emotions matter.

Workshops focused on “hot topics” can be a powerful motivator for families. Topics will vary depending on the developmental level of children; however, families often include multiple children, and topics addressing a range of ages can be useful. Some examples that have been most popular for RULER for families are homework stress, sibling rivalry, tantrums, texting/technology, communicating respectfully and effectively, study skills, holiday stress, and becoming a better parent. Rather than running sessions specifically on tools like the Mood Meter and Meta-Moment, we have embedded the tools into workshops on hot topics. Focus groups have confirmed that families are more likely to engage and attend the hot topics workshops than the trainings with an explicit focus on the principles of EI. Furthermore, when schools are given the choice of which workshops they want, they tend to choose the hot topics.

Working with families provides some additional opportunities for building emotionally intelligent schools and districts. Parents and caregivers who attend multiple workshop sessions can begin to do some of the facilitating, or eventually run workshops at their PTA nights, which can lower defenses and increase embracing the skills and tools of EI, as well as help increase the reach of the SEL programming. Family workshops are also an opportunity to make explicit how emotional skills transfer to all aspects of life and especially how they translate into emotionally intelligent communication among families. Pilot data has found that parents who attend one or more of the workshops report that, while they were first drawn in by an interest in their children’s EI skills, they have since broadened their focus to also include their own EI skill development (Brackett, Rivers, Lee, & O’Byron, 2015).

Reaching All Families

Even with flexible workshop schedules in the mornings or evenings, and hot topics that attract parents, many families do not attend such events. Engaging all families is important, and here we offer several additional ways to reach out.

One strategy is for students to be the ambassadors of EI to their families. For example, the Charter can be adapted into a family Charter activity. Students are taught how to lead a family Charter activity at home and then complete family Charters as their homework. Students and their parents present their Charters at school, and the family Charters are displayed around the school building. During focus groups, parents reported that although they were skeptical of EI at first, once their kids began to learn the RULER skills, the impact was undeniable. Children who began to use the Meta-Moment and Blueprint to resolve conflicts with family and friends, and who began identifying their emotions with the help of the Mood Meter and expressing how they were feeling more appropriately, quickly convinced their parents of the importance of EI skills in education.

At the preschool level, Rivers, Tominey, et al. (2013), present several ways to teach families about EI skills. Preschool RULER, for example, builds family activities into the daily drop-off routine. Parents can help their children identify their feelings on the Mood Meter in the morning as they enter their classroom. Teachers also send home activities that promote parent-child interactions around EI skills, such as a CD of songs that teach the RULER skills to listen and sing at home.

Several schools have begun to experiment with other creative ways to connect with busy parents. For example, RULER skills can be included in students' report cards and in teacher evaluations, adding a layer of accountability. Some schools have also requested shorter family workshops, such as 15-minute breakfasts, to help deliver information to parents when they drop their children off at school. Shorter content for newsletters, such as simple but powerful quotes, has also been requested, which can be easily translated into different languages as needed.

Summary and Conclusions

RULER is a whole-school or district approach to SEL grounded in the ability-based theory of EI. The goal is to integrate the teaching of five key RULER skills – recognizing, understanding, labeling, expressing, and regulating emotions – from preschool to high school. This work has taught us several important lessons. First is the importance of a whole-school approach: training and programming must involve school leadership, teachers, all staff, and the students themselves. Second is the full integration of the skills and tools into daily routines and the curriculum. The Mood Meter and the Blueprint were not designed to be taught and practiced in discrete ways (e.g., Thursdays from 2:00 p.m. to 3:00 p.m.), but rather to be integrated across the school day and into many different subject areas.

The importance of developmental appropriateness and continuous teaching of EI across grades cannot be understated, starting with the preverbal preschooler who can learn how to show her emotion with a facial expression to the high school student who can learn how to accurately describe the difference between envy and jealousy. At each age, EI can be taught through the adaptation of RULER Anchor Tools (the Charter, Mood Meter, Meta-Moment, and Blueprint), as well as through the types of questions that teachers ask, the kinds of activities in which they engage their students, and the successful modeling of the skills. We also outlined the importance of generalization of acquired EI skills outside of the classroom, to include families and the community in promoting emotionally intelligent interactions in all areas of children's lives.

Evidence-based SEL curricula, like RULER, address the social and emotional development of students and the adults who support them. The intention is to provide students with a broad range of skills to help them cultivate quality relationships, be psychologically and physically healthy, and become successful members of society. Our hope is that in the next decade, more schools will adopt SEL so that children, and the adults who support them, can all reach their full potential.

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Chapter 8

School-Based Social and Emotional Learning Interventions: Common Principles and European Applications



Neil Humphrey

Abstract In this chapter, I provide an overview of contemporary theory and research relating to universal, school-based social and emotional learning (SEL) interventions. I begin with a working definition and brief discussion of the rationale for SEL, before getting “under the hood” to consider the form, function, and characteristics of available interventions. I provide illustrative examples throughout, with a particular emphasis on those originating in Europe. There follows a discussion of the evidence pertaining to outcomes and moderators of SEL programs, including cultural transferability, stage of evaluation, implementation variability, differential responsiveness, intervention characteristics, and developer involvement in evaluation.

The Case for Social and Emotional Learning

Universal, school-based social and emotional learning (SEL) interventions foster the social and emotional skills of children and young people through explicit instruction in the context of learning environments that are safe, caring, well-managed, and participatory (Humphrey, 2013; Weissberg, Durlak, Domitrovich, & Gullotta, 2015). SEL skills include self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2013). Such skills have considerable utility. They aid children to effectively navigate the social world and promote resilience to bullying and victimization, violence, and a wide range of other negative processes and outcomes (Sklad, Diekstra, De Ritter, Ben, & Gravesteyn, 2012). Crucially, SEL skills also facilitate learning in the classroom (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Learning is a social process, and it stands to reason that improved social and emotional competence will

N. Humphrey (✉)

Manchester Institute of Education, University of Manchester, Manchester, UK
e-mail: neil.humphrey@manchester.ac.uk

facilitate academic success. Indeed, research demonstrates that social and emotional skills and academic progress are positively interrelated (Qualter, Gardner, Pope, Hutchinson, & Whiteley, 2012). Furthermore, longitudinal studies highlight the predictive utility of childhood social-emotional competencies for mental health and labor market outcomes in later life (Goodman, Joshi, Nasim, & Tyler, 2015).

In mapping SEL and its theoretical roots, Humphrey (2013) argues that it represents the application to education of emotional intelligence (EI) theory and research (e.g., Mayer, Roberts, & Barsade, 2008) and developmental psychological models of social-emotional competence (e.g., Denham & Brown, 2010) within the broad principles of implementation and prevention science (e.g., August, Gewirtz, & Realmuto, 2010; Ogden & Fixsen, 2014). In relation to EI, it is not difficult to see the influence of Salovey and Mayer's (1990) ability-based model (and the body of work that followed it) in many, if not all, SEL interventions. With regard to developmental psychology, Saarni's (1999) thesis on the development of emotional competence and Rose-Krasnor's (1997) work on the nature of social competence are also evident. In terms of prevention and implementation science, SEL draws heavily on the "inoculation metaphor" in its positioning of a universalist approach as the optimal means for achieving widespread social change (Humphrey, 2013; see also Chap. 12 by Elias, Nayman, & Duffell, this volume) while also underscoring the importance of delivery processes (e.g., implementation quality) to achieve this (Durlak, 2016). More broadly, much contemporary SEL borrows liberally from Bronfenbrenner's (2005) ecological systems theory and Masten's (2014) propositions regarding risk and protective processes in human development. Finally, SEL is also associated with work on moral and character education, sharing as it does an emphasis on concepts such as respect, justice, honesty, and integrity (Elias, 2009).

The rationale for SEL has evolved and shifted over time and across countries and cultures, though a central thread throughout is the notion of a youth in crisis (Ecclestone & Hayes, 2008; Hoffman, 2009). Early work in the United States (USA) emphasized the potential role of SEL in stemming a perceived rise in school violence and substance abuse (Merrell & Gueldner, 2010). In the United Kingdom (UK), the emergence of SEL can be seen initially as a response to concerns about child well-being triggered by international comparative research (e.g., Institute for Public Policy Research, 2006; UNICEF, 2007), alongside governmental concerns regarding antisocial behavior and a perceived need to capitalize on growing public and professional interest in populist work on EI (e.g., Goleman, 1995) (Humphrey, 2012). More recently, a discursive shift has seen SEL repurposed as a central component of efforts to promote resilience to the onset of mental health problems against the backdrop of a public health crisis caused by cuts to children's services in this area (Humphrey, Wigelsworth, Lendrum, & Greenberg, 2016).

Proponents of SEL are also increasingly able to draw on economic, neuroscientific, and epigenetic evidence as a means to establish its legitimacy. In relation to economics, emerging evidence positions SEL as providing a positive "return on investment" (Jones, Greenberg, & Crowley, 2015). For example, a recent analysis of six prominent SEL interventions (4Rs; Positive Action; Life Skills Training;

Second Step; Responsive Classroom; and Social and Emotional Training) showed an aggregate benefit-cost ratio of 11 to 1; that is, for every dollar invested, there is a return of 11 dollars (Belfield et al., 2015).¹ With regard to neuroscience, consider the idea of putting feelings into words. This is an extremely common SEL strategy promoted as a means to manage difficult social experiences. Lieberman et al.'s (2007) imaging study provides neuroscientific evidence to support this, demonstrating that affect labeling acts as a disruptor to amygdala activity in response to affective stimuli while also increasing activity in the prefrontal cortex. That is, labeling our emotional experiences helps us to think before we act. Finally, research in the field of behavioral epigenetics – how nurture shapes nature to influence behavior – is providing powerful insights into the processes and mechanisms by which SEL in early childhood may yield positive outcomes throughout the lifespan, particularly for children deemed to be “at risk.” For example, Weaver et al.'s (2004) experiments with rats demonstrated how variation in maternal behaviors (in this case, pup licking and grooming and arched-back nursing) altered epigenetic signals that control the activation of stress response genes. Put more simply, the researchers identified an epigenetic mechanism through which they were able to show how a nurturing environment switched on genes that enabled the rat pups to deal with stress more effectively as adults. While caution is needed in generalizing the implications of such studies to similar processes in human development, the parallels with the logic and theory of SEL are self-evident.

Under the Hood: Form, Function, and Characteristics of SEL Interventions

Before examining SEL interventions in more detail, it is worth briefly exploring what we mean when we talk about “interventions.” Fraser and Galinsky (2010) offer a helpful definition, defining them as “purposively implemented change strategies” (p. 459). Thus, an intervention is *purposive*; it is intentional, not accidental. Second, an intervention is *implemented*; it therefore represents a set of activities, processes, and actions – things that are done that can be observed or inferred. Third, interventions are about *change*. One level of change refers to the differences in the activities, processes, and actions that characterize the intervention as compared to what was done before it was introduced. The second level of change refers to the intended outcomes that are the ultimate product of the intervention. Finally, interventions are *strategic*; that is, their constituent components form a coherent, organized plan to bring about the change noted above.

¹ Such ratios are determined by calculating “shadow prices” (e.g., applying a monetary value) for the various benefits accrued through SEL, such as reducing aggressive behavior and weighing these up against the cost of all of the inputs required to implement the intervention (e.g., training, materials).

Taxonomies and frameworks in the published literature (Forman, 2015; Foxcroft, 2014; Humphrey, 2013; Moore et al., 2015) indicate that interventions can be characterized by a number of features, including:

- Form (e.g., universal, selective, indicated)
- Function (e.g., environmental, developmental, informational)
- Level and location (e.g., individual, group, family, school, community, societal)
- Complexity and component structure (e.g., single component, multicomponent; curriculum, environment/ethos, parents/wider community)
- Prescriptiveness and specificity (e.g., manualized, flexible)
- Intervention agents (e.g., teachers, external staff)
- Recipients (e.g., teachers, students)
- Procedures and materials (e.g., what is done, how often)

The definition provided earlier positions SEL as a universal approach in terms of form. The function of this approach is primarily developmental in nature because of the focus on “the development of skills that are key in socialisation and social development of appropriate behaviours” (Foxcroft, 2014, p. 820). The interventions discussed in this chapter are located in schools. However, I recognize and acknowledge the potential for SEL interventions to take place elsewhere, such as youth work settings – although, by definition, these tend *not* to be universal; furthermore, the evidence base for such work is much less robust (Clarke, Morreale, Field, Hussein, & Barry, 2015).

Moving beyond these basic features, we begin to see evidence of the considerable diversity that characterizes the field and how this is influenced by the cultural context in which programs are developed, as described in the next section on SEL interventions in Europe and in other writings (Torrente, Alimchandani, & Aber, 2015; see also Chap. 5 by Huynh, Oakes, & Grossmann, this volume). To illustrate this, the reader is asked to consider two contrasting examples: the Promoting Alternative Thinking Strategies (PATHS) curriculum developed in the USA (Greenberg & Kusche, 1993) and the Social and Emotional Aspects of Learning (SEAL) program developed in England (Department for Children Schools and Families, 2007; Department for Education and Skills, 2005b). In terms of complexity and component structure, the “backbone” of PATHS is a series of grade-specific classroom curriculum modules designed to teach children to manage their behavior, understand their emotions, and work well with others. It may therefore be described as a single-component program.² By contrast, despite having similar aims, SEAL was designed to be multicomponent, comprising four key elements: (i) the use of a whole-school approach to create a positive school climate and ethos, (ii) direct teaching of social and emotional skills in classroom contexts (akin to the PATHS taught curriculum), (iii) the use of teaching and learning approaches that support the learning of such skills, and (iv) continuing professional development for school staff. In terms of prescriptiveness, SEAL was envisaged as a loose enabling

²Although PATHS also includes generalization activities and some parent materials, these do not receive as much attention in the program materials and are arguably peripheral.

framework for school improvement, with schools encouraged to “take from it what they wish” (Weare, 2010, p. 10) rather than follow a single model of implementation. This flexibility was designed to promote local ownership and sustainability while also encouraging professional autonomy (Humphrey, Lendrum, & Wigelsworth, 2010). On the other hand, PATHS offers an example of a manualized intervention in which fidelity (e.g., lesson “scripts” provided for teachers) and dosage (e.g., to be taught twice per week) of implementation are seen as being central to the achievement of intended outcomes.

Turning now to intervention agents, we see some shared ground between PATHS and SEAL. Both programs see the class teacher as being the principal implementer and agent of change. Similarly, both also view other adults in school (e.g., the head teacher, paraprofessionals, lunchtime supervisors) as being integral to creating a climate that is congruent with the aims of the program and in reinforcing its principles. With regard to recipients, however, there is divergence once more. While both programs position students as the primary recipients of the intervention, SEAL also gives explicit consideration to the notion that school staff will benefit from support: “social and emotional skills are as central to the performance and emotional well-being of staff as they are to the learning and well-being of young people” (Department for Children Schools and Families, 2007, p. 35). The secondary SEAL guidance document reflects this view, with staff development given prominence as one of the substantive sections.

Finally, in terms of materials and procedures, PATHS utilizes curriculum packs for each class containing lessons and send-home activities that cover topics such as identifying and labeling feelings, controlling impulses, reducing stress, and understanding other people’s perspectives, in addition to associated physical resources and artifacts (e.g., posters, feelings dictionaries). PATHS lessons follow a common format that includes an introduction from the teacher, in which the lesson topic and objectives are introduced; a main activity, often built around a group activity or story; and a brief plenary/closure, in which learning is reviewed. Frequent prompts to elicit student responses and clarify learning are included throughout. The program utilizes a “spiral” curriculum model, whereby (i) topics and concepts are revisited; (ii) units and lessons are developmentally sequenced; (iii) new learning is linked to previous learning; and (iv) the competence of learners increases with each successive visit to a topic or concept.

By contrast, the SEAL materials are presented thematically. For example, in primary SEAL, schools begin the new academic year by working through the “New Beginnings” theme, in which “children explore feelings of happiness and excitement, sadness, anxiety and fearfulness, while learning (and putting into practice) shared models for calming down and problem-solving” (Department for Education and Skills, 2005a, p. 1). SEAL implementation in schools is supported by a number of guidance documents and materials pertaining to its different components (e.g., Family SEAL, SEAL small group work) and versions (e.g., primary SEAL, secondary SEAL). However, consistent with the flexible approach noted earlier, schools are actively encouraged to explore different approaches to implementation that support identified school improvement priorities rather than follow a single model.

This philosophy is reflected in the absence of materials for some components. For example, in the primary SEAL, small group work guidance materials were only available for four of the seven themed interventions, with school staff encouraged to develop their own (Department for Education and Skills, 2006). In the guidance materials produced for secondary SEAL, a variety of contrasting implementation case studies are included (Department for Children Schools and Families, 2007).

SEL Interventions in Europe

Recent years have seen significant growth in the prominence of SEL in education systems around the world (Marcelino Botin Foundation, 2011; Torrente et al., 2015). To name but a few, countries that have actively embraced SEL include the USA, the UK, Australia, Sweden, Singapore, Italy, Portugal, Spain, and the Netherlands. Early work in the USA undoubtedly laid the groundwork for the development of SEL elsewhere in the world and has certainly been predominant in the academic literature. For example, in an oft-cited meta-analysis of SEL interventions, 87% of trials had been conducted in the USA (Durlak et al., 2011). In Europe, the increasing interest in SEL has yielded two approaches to implementation. First, a number of countries and jurisdictions have opted to “import” existing SEL interventions (typically, though not always from the USA) and adapt them to suit their cultural context and needs. For example, we have seen the implementation of the adapted versions of the Second Step curriculum in Germany (Schick & Cierpka, 2005) and Norway (Holsen, Smith, & Frey, 2008); the aforementioned PATHS in the UK (Berry et al., 2015; Ross, Sheard, Cheung, Elliott, & Slavin, 2011), the Netherlands (Goossens et al., 2012), and Switzerland (Malti, Ribeaud, & Eisner, 2011); and the FRIENDS intervention in Germany (Essau, Conradt, Sasagawa, & Ollendick, 2012), with varying degrees of success (see discussion of cultural transferability as a moderator of outcomes in the next section).

Second, advocates in a number of European nations have opted to develop and implement their own, “homegrown” models of SEL intervention. These are the principal focus of this section, for several reasons. US-based interventions have received ample coverage elsewhere (see, e.g., CASEL, 2003, 2013; Durlak, Domitrovich, Weissberg, & Gullotta, 2015), including other chapters in this volume (see, e.g., Chap. 9 by Espelage, King, & Colbert, this volume; Chap. 7 by Hoffman, Ivcevic, & Brackett, this volume). By contrast, there has been less attention to European interventions, which rarely feature in major SEL texts. Furthermore, it has been argued by Weare and Nind (2011) that the focus on principles such as autonomy, local adaptability, and ownership in European nations and cultural contexts tends to produce approaches to SEL that are distinct from many developed in the USA, being more flexible, non-prescriptive, and holistic in nature, “emphasizing not just behaviour change and knowledge acquisition, but also changes in attitudes, beliefs and values” (p. 65). The preceding contrast between PATHS and SEAL provides a case in point for this claim.

Examples of “homegrown” European interventions include (but are not limited to) Zippy’s Friends in a variety of European nations (Holen, Waaktaar, Lervåg, & Ystgaard, 2012), the aforementioned SEAL program in England (Department for Children Schools and Families, 2007; Department for Education and Skills, 2005b), By Your Hand (Cavioni & Zanetti, 2015) and The Stories of Ciro and Beba (Grazzani, Ornaghi, Agliati, & Brazzelli, 2016) in Italy, Slowly But Steadily (Raimundo, Marques-Pinto, & Lima, 2013) and Positive Attitude (Coelho, Marchante, & Sousa, 2015) in Portugal, the Peer-Helping Game in Spain (Garaigordobil & Echebarria, 1995), Promoting Pro-social Behavior in the Netherlands (Mooij, 1999), and Social and Emotional Training in Sweden (Kimber, Sandell, & Bremberg, 2008). Having already provided a description of the SEAL program in the preceding section, below I provide a brief outline of three of these European SEL interventions: Zippy’s Friends, Social and Emotional Training, and Slowly But Steadily.

Zippy’s Friends (Various Countries)

It is difficult to assign Zippy’s Friends a specific country of origin because it was developed by Befrienders Worldwide, who has centers in over 40 countries, and a team of European academics. It is now implemented in early primary education (ages 5–7) settings in a large number of European nations (including the UK, Ireland, the Netherlands, Denmark, and France) and, indeed, countries across the world (e.g., the USA, Chile, India). The primary aim of the intervention is to improve children’s mental health and well-being by equipping them with the social and emotional skills that enable more effective coping in difficult circumstances. Zippy’s Friends promotes eight key principles, as follows: (i) children choose their own solutions; (ii) positive skills are reinforced; (iii) repetition and continuity are essential for learning; (iv) abilities are developed in different settings; (v) children are active participants; (vi) children help each other; (vii) children evaluate their own success; and (viii) teachers are open to listening to children (Partnership for Children, 2016).

The intervention follows a modular approach built around six stories about Zippy, a stick insect, and his friends, a group of children. The stories focus on feelings, communication, making and breaking relationships, conflict resolution, dealing with change and loss, and coping. Each story is explored over the course of 4 weekly sessions, wherein part of the story is read by the teacher and children then participate in a range of activities including games, drawing, and discussion. Sessions follow a common format that begins with a review of previous learning and ends with each child providing feedback to reflect their feelings (Partnership for Children, 2016).

A number of studies provide evidence of the impact of Zippy’s Friends. For example, Holen et al.’s (2012) randomized trial conducted in Norway found significant effects on children’s coping skills and mental health. Similarly, Clarke, Bunting, and Barry’s (2014) randomized trial in Irish schools found intervention effects on children’s self-awareness, self-regulation, motivation, and social skills.

Social and Emotional Training (Sweden)

Social and Emotional Training (SET) was developed in Sweden and focuses on the promotion of children's self-awareness, self-regulation, empathy, motivation, and social skills and takes inspiration from US-based SEL interventions (Kimber, Sandell, & Bremberg, 2008). It is delivered by class teachers throughout Grades 1–9 (ages 7–16), encompassing primary and lower secondary education. Like PATHS, SET centers on the delivery of a taught curriculum. Thus, teachers work through a series of 45-minute lessons with children. In primary education settings, these sessions are delivered twice a week; in lower secondary settings, the sessions are delivered once a week. Across the curriculum, a series of themes are addressed, as follows: “social problem solution, handling strong emotions, appreciating similarities and differences, clarification of values, conflict management, interpretation of pictures and narratives, making more of what makes one feel good, resisting peer pressure and being able to say ‘No’, knowing what one is feeling, recognizing people and situations, cooperation, listening to and relaying messages, setting goals and working to attain them, giving and receiving positive feedback and stress management” (Kimber et al., 2008, p. 136). The lessons themselves include role-play and modeling exercises, and there is an emphasis on participating children and young people practicing in- and outside of school contexts to promote generalization of skill acquisition.

Kimber's (2011) doctoral research for the Karolinska Institutet draws together the evidence for SET, which has been published across a variety of outputs (e.g., Kimber et al., 2008) since the intervention was first implemented in Sweden in the early 2000s. Her quasi-experimental study demonstrated favorable effects of SET on the prevention of mental health difficulties and risky behaviors (e.g., alcohol use) among adolescents.

Slowly but Steadily (Portugal)

Slowly But Steadily (SBS) was designed to draw upon the key concepts and principles emerging from the developing evidence base for SEL but using materials developed and piloted in the Portuguese educational and cultural context. Thus, the intervention theory borrows from the affective-behavioral-cognitive-dynamic model that underpins the aforementioned PATHS curriculum while also applying the principles of ecological systems theory (Bronfenbrenner, 2005). It consists of a taught curriculum that includes units focusing on self-awareness, social awareness, emotion regulation, interpersonal skills, and responsible decision-making. SBS is delivered using a range of approaches including didactic instruction, posters, storytelling, reflection activities, modeling, role-playing, feedback, reinforcement (social and self), and group games. For example, in the Emotions Game, played as part of the self-awareness unit, children receive cards containing a word describing

an emotion and are required to enact it for the other members of the class, who have to guess what emotion is being portrayed. A recent quasi-experimental study of SBS by Raimundo et al. (2013) demonstrated significant intervention effects on peer relations and social competence.

Outcomes and Moderators of SEL Interventions

The empirical basis supporting the use of SEL interventions is growing. Three recent meta-analyses have provided robust evidence demonstrating their efficacy in improving children's social-emotional competencies and reducing mental health problems, in addition to a range of other salient outcomes (Durlak et al., 2011; Sklad, Diekstra, De Ritter, Ben, & Gravesteijn, 2012; Wigelsworth, Lendrum, Oldfield, Scott, Ten-Bokkel, Tate, & Emery, 2016). The effect sizes in relation to these outcomes suggest that, on average, SEL interventions produce meaningful and practically significant change. For example, the most recent of the above meta-analyses reported an effect of $d = 0.53$ on the primary outcome of social-emotional competence (equivalent to a 20 percentile-point improvement using Cohen's U3 index; Durlak, 2009), alongside effects of $d = 0.33$ (13 percentile-point improvement) for pro-social behavior and $d = 0.28$ for both conduct problems and academic achievement (11 percentile-point improvement).

However, these aggregated effects mask considerable heterogeneity at the individual study level. Not all SEL interventions are equally effective for all students (Wiglesworth et al., 2016). Given this, an important task is to identify the key moderators of SEL outcomes. A useful starting point given the preceding discussion is cultural transferability.

Cultural Transferability

As noted above, most SEL trials to date have been conducted in the USA (Durlak et al., 2011). However, transferability cannot be assumed (Weare & Nind, 2011). This is particularly true in cases where evidence-based interventions are "exported" to other countries and cultures, as has been the case in some European nations and jurisdictions. A perceived lack of fit between a given intervention and the needs, values, and expectations of adopters may act as a significant barrier to implementation; as such, a major factor in the successful transportability of interventions is their adaptability (Castro, Barrera, & Martinez, 2004). By way of example, consider the aforementioned PATHS curriculum: evidence of its efficacy is much more consistent in US-based studies than those carried out elsewhere in the world (including trials in the UK, the Netherlands, and Switzerland). Overall, the evidence base here is somewhat limited given that the overwhelming majority of SEL interventions are evaluated only in their country of origin; however, where there are

published trials of exported interventions, there is evidence that their effects on certain key outcomes (including social-emotional competence, pro-social behavior, and emotional symptoms) can become attenuated (Wigelsworth et al., 2016).

Stage of Evaluation

The stage of evaluation of a given intervention also appears to have a bearing on the impact of SEL. In efficacy trials, the emphasis is on establishing whether an intervention *can* work via tightly controlled experimental studies in which the conditions of implementation are optimized. By contrast, effectiveness trials establish whether an intervention *will* work when implemented in ordinary, real-world contexts (Gottfredson et al., 2015). When Wigelsworth et al. (2016) examined this issue in their recent meta-analysis, their findings were startling. They determined that nearly 70% of published SEL studies reported significant intervention effects under efficacy conditions. However, the impact of SEL was reduced for six out of seven outcomes examined when interventions were assessed under effectiveness conditions – significantly so for pro-social behavior, conduct problems, emotional distress, and academic achievement. For example, the effect size for academic achievement dropped by nearly half, from $d = 0.38$ to $d = 0.22$ (Wigelsworth et al., 2016). The results of this analysis have important implications in terms of managing expectations about the likely impact of SEL interventions when implemented “out in the wild” while also prompting questions about the factors that may influence the successful adoption, implementation, and sustainability of SEL interventions when they are disseminated at scale (Greenberg, 2010). That is, if we know that SEL interventions *can* work, how do we make sure that they *will* work?

Implementation Variability

A further key moderator of SEL outcomes is implementation variability. Implementation is the process by which an intervention is put into practice (Lendrum & Humphrey, 2012) and may be described in terms of the following dimensions (Durlak & DuPre, 2008; Humphrey, Lendrum, et al., 2016):

- *Fidelity* – the extent to which implementers adhere to the intended delivery model
- *Dosage* – how much of the intervention has been delivered and/or received
- *Quality* – how well different components of the intervention are delivered
- *Responsiveness* – the degree to which participants engage with the intervention
- *Reach* – the rate and scope of participations
- *Program differentiation* – the extent to which intervention activities can be distinguished from other, existing practices

- *Monitoring of control/comparison conditions* – in a trial context, that which is taking place in the absence of the intervention
- *Adaptation* – the nature and extent of changes made to the intervention

Many studies have consistently demonstrated that interventions are rarely, if ever, implemented as designed and that, crucially, variability in the aforementioned dimensions is predictive of the achievement of expected outcomes (for a review of the evidence pertaining specifically to SEL interventions, see Durlak, 2016). For example, in the national evaluation of secondary SEAL in England, implementation quality was found to moderate the impact of the intervention on conduct problems, such that significantly greater reductions in students' conduct problems were observed in schools where implementation was judged to be high quality as opposed to moderate or low quality (Wigelsworth, Humphrey, & Lendrum, 2013). Similarly, in the analysis of Zippy's Friends, Clarke et al. (2014) found that higher rates of implementation fidelity were directly related to improvements in students' emotional literacy scores.

Given the strength of the relationship between implementation variability and SEL intervention outcomes, attention has unsurprisingly turned to the question of what influences implementation. In this vein, a range of factors thought to affect implementation have been identified, including preplanning and foundations, the implementation support system, the implementation environment, implementer factors, and intervention characteristics (Domitrovich et al., 2008). Empirical verification of these factors as drivers of implementation variability is still emergent (Durlak, 2015). However, by way of example, Williford, Wolcott, Whittaker, and Locasale-Crouch (2015) found that variability in teacher beliefs about children's behavior predicted both implementation dosage and generalized practice (i.e., outside prescribed sessions) in the Banking Time intervention, which is aimed at improving the quality of teacher-child interactions.

Differential Responsiveness

Just as implementation of SEL interventions can be variable, so too can the responsiveness of different groups of students. Participants in interventions are not simply passive consumers, and we should not expect them to respond in a uniform manner (Bonell, Fletcher, Morton, Lorenc, & Moore, 2012). Thus, while "intention to treat" analysis and reporting of average effects remain a fundamental element of evaluation, an emerging body of research seeks to examine heterogeneity of responses to SEL interventions among population subgroups (Sandell & Kimber, 2013). Much of this work focuses on outcomes for those children and young people who are identified as being "at risk" and/or subject to inequities (Clarke et al., 2015). For example, Holsen, Iversen, and Smith (2009) reported greater gains among children from socioeconomically disadvantaged backgrounds on selected outcomes (e.g., life satisfaction, social competence, school performance) in an evaluation of a

Norwegian adaptation of the Second Step curriculum. Similar differential findings were reported in relation to Zippy's Friends by Holen et al. (2012). In relation to gender, Raimundo et al. (2013) found significantly greater benefits of the Slowly But Steadily Intervention for boys in the domains of self-management, aggression, and social problems. One problem with such analyses, however, is that their approach to differential responsiveness is arguably too simplistic, treating risk status as a binary function determined by a single variable (e.g., male vs female). Work that explores differential responsiveness to SEL intervention using more sophisticated analytical techniques that reflect profile complexity, such as latent class regression (e.g., Sandell & Kimber, 2013), is therefore welcome.

Intervention Characteristics

One of the many advantages of burgeoning SEL research base is that it has allowed those working in the field to begin to identify the common characteristics of effective interventions. For example, Durlak et al.'s (2011) meta-analysis identified several core intervention design features that were associated with improved outcomes. The authors found that "SAFE" interventions – those that use a sequenced step-by-step training approach and active forms of learning, focus sufficient time on skill development, and have explicit learning goals – produced larger effect sizes for a range of outcomes than those that did not make use of these practices. In a similar vein, Clarke et al.'s (2015) recent review found that effective SEL interventions tended to (i) focus on teaching skills, (ii) use competence enhancement and empowering approaches, (iii) use interactive teaching methods (e.g., role-play), (iv) have well-defined goals, and (v) include explicit guidance for implementers through provision of training and/or intervention manuals. These core characteristics are also supported by the findings of Weare and Nind's (2011) "review of reviews" on mental health promotion in schools, including SEL interventions.

However, there is also much to be learned from the intervention characteristics that do not appear to make a difference to outcomes. For example, it has long been assumed that multicomponent SEL interventions would prove to be more effective than those with a single component because of their increased comprehensiveness and broader ecological focus, both of which would presumably support enhanced skill consolidation and generalization. However, Durlak et al. (2011) found that this was not the case – single-component interventions appeared to be equally effective. The authors speculate that this surprising finding may be attributable to the fact that multicomponent interventions were less likely to follow "SAFE" procedures (see above) and more likely to experience implementation problems. Indeed, the earlier contrast between PATHS and SEAL supports this – the latter having limited evidence of impact and with the evidence suggesting that this was at least in part due to poor implementation and questionable intervention theory (Wigelsworth, Humphrey, & Lendrum, 2013). To Durlak et al.'s speculation, I would also add the considerable imbalance evident in the field: there are relatively few studies of *truly*

multicomponent interventions. For example, two systematic reviews conducted on behalf of the National Institute for Health and Care Excellence in England could not find evidence for *any* programs that contained elements involving the curriculum, environment/ethos, *and* parents/community (Adi, Kiloran, Janmohamed, & Stewart-Brown, 2007; Blank et al., 2010).

Developer Involvement in Evaluation

Finally, in assessing the SEL research base, attention must be paid to the level of involvement of the intervention developer in evaluation studies. Most SEL evaluations to date have been led by developers or individuals closely associated with developers (Wigelsworth et al., 2016). Indeed, Greenberg (2010) notes that in the broader field of prevention, few intervention studies have been subjected to independent replication. This is an important issue because in other fields, intervention effects have been shown to be considerably larger when developers are involved in evaluation studies (Eisner, 2009). For example, in a review of psychiatric interventions, studies where developers were directly involved in the research were nearly five times more likely to report positive results (Perlis et al., 2005). Similarly, in a meta-analysis of 300 studies of crime prevention interventions, Petrosino and Soydan (2005) found an average effect size of 0.47 for developer-led studies, contrasted to the effect of exactly zero for independent evaluations. Such effects may be due to bias, higher-quality implementation, or a combination of these two factors (Eisner, 2009). However, Wigelsworth et al.'s (2016) meta-analysis of SEL interventions does not support the “developer effect” found in other areas – developer-led or developer-involved studies did not produce significantly larger effect sizes than independent studies across the range of outcomes studied; this is an important finding which suggests greater confidence can be placed in the veracity of the body of research as a whole.

Conclusion

In this chapter I have provided an overview of contemporary theory and research relating to universal, school-based SEL interventions, with a particular emphasis on those originating in Europe. Such interventions offer a direct application of EI theory and research and developmental psychological models of social-emotional competence within the broad principles of implementation and prevention science. Analysis of their form, function, and characteristics can provide valuable insights into the convergences and divergences evident in the myriad interventions available. The evidence base for SEL is substantial, with three recent meta-analyses and numerous reviews highlighting meaningful effects on a range of outcomes. However, the magnitude of impact of SEL interventions appears to vary as a function of

cultural transferability, stage of evaluation, implementation variability, differential responsiveness, and specific intervention characteristics. Unlike some other fields, the involvement of intervention developers in evaluation studies does not appear to significantly influence their outcomes, meaning that greater confidence can be placed in the veracity of the body of research as a whole.

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Chapter 9

Emotional Intelligence and School-Based Bullying Prevention and Intervention



Dorothy L. Espelage, Matthew T. King, and Cassandra L. Colbert

Abstract Bullying among all students continues to be a concern for students, parents, and educators, with harmful detrimental academic and psychological effects. With legislation mandating that schools address the phenomenon, school officials are faced with the decision of selecting a program that meets the unique needs for its students and teachers, while maximizing its potential to reduce bullying. School-based prevention and intervention efforts to reduce bullying are often predicated on theories that assume that bullying involvement stems from an interaction among individual characteristics of youth, parental factors, peer influences, school environment, and societal influences. In this chapter, we discuss the definition and prevalence of bullying and explore the different individual and contextual influences on bullying involvement according to the social-ecological model of bullying. Many of these influences are connected to the concepts of emotional intelligence (EI) and social-emotional learning (SEL). We review a number of school-based prevention programs that align with the constructs of EI and SEL and provide opportunities for youth to learn social-emotional skills that are associated with decreases in bullying and other forms of aggression. Successful elements of these programs include use of multimedia, classroom rules, teacher training, psycho-educational information for parents, and cooperative group work. These programs are evaluated in terms of effectiveness for bullying prevention and how they are consistent with EI and SEL approaches. Considerations for schools when selecting a program are discussed.

Bullying has been conceptualized as repeated attempts of physical, verbal (e.g., threats, insults), relational (e.g., social exclusion), or cyber-aggression (e.g., email, texting) that involve an abuse of power (Olweus, Limber, & Mihalic, 1999). More recently, the Department of Education and the Centers for Disease Control provided

D. L. Espelage (✉)

Department of Psychology, University of Florida, Gainesville, FL, USA
e-mail: espelage@ufl.edu

M. T. King · C. L. Colbert

University of Illinois, Urbana-Champaign, IL, USA
e-mail: king56@illinois.edu; clcolbr@illinois.edu

the following research definition: “Bullying is any unwanted aggressive behavior(s) by another youth or group of youths who are not siblings or current dating partners that involves an observed or perceived power imbalance and is repeated multiple times or is highly likely to be repeated. Bullying may inflict harm or distress on the targeted youth including physical, psychological, social, or educational harm” (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014, p. 7). Within this definition, bullying can occur face to face and/or through technology (e.g., cell phones, computers), given that face-to-face bullying is often associated longitudinally with perpetration and victimization online and with technology (Espelage, Rao, & Craven, 2013).

Indeed, bullying has risen to be a public health concern for children and adolescents over the last decade. According to national US data, although the percent of students (12 to 18 years of age) who reported being victimized at school decreased from 10% in 1993 to 3% in 2013, these reductions were not found in schools that have high levels of violence, gang activity, and/or drug activity. Further, an astounding 23% of public school students reported that bullying was a daily occurrence (Robers, Zhang, Morgan, & Musu-Gillette, 2015).

A cursory review of the literature yields over 1000 peer-reviewed articles published on school bullying, another 1500+ on peer victimization, and almost 2000 articles on youth aggression. To date, several meta-analyses have been conducted on the associations between youth bully perpetration and/or victimization and other risk factors and outcomes (Cook, Williams, Guerra, Kim, & Sadek, 2010; Gini & Pozzoli, 2013; Hawker & Boulton, 2000; Kowalski, Giumetti, Schroeder, & Lattanner, 2014; Nakamoto & Schwartz, 2010; Reijntjes, Kamphuis, Prinzie, & Telch, 2010). Bullying is a serious problem that can harm students’ school performance in the form of school avoidance, lower levels of academic achievement, and more conflictual relations with teachers and students (Cook et al., 2010; Glew, Fan, Katon, Rivara, & Kernic, 2005). Across all of these meta-analyses, correlations between youth involvement in bullying and victimization and academic and psychological correlates are likely explained through individual mediators (e.g., depression, peer rejection) or moderators (e.g., school climate, social standing). In addition to negative school outcomes, victims, bullies, and bully-victims often report adverse psychological effects, including higher rates of depression, anxiety, and suicidal behaviors (Espelage & Holt, 2013; Holt & Espelage, 2013; Nansel, Haynie, & Simons-Morton, 2001).

In this chapter, we highlight the connections between the known risk and protective factors in bullying involvement and the concepts of emotional intelligence (EI) and social-emotional learning (SEL) and make the case for adopting a broadband approach to bullying prevention that targets these factors through the development and practice of EI and SEL skills within students’ everyday social contexts. We then review a number of school-based prevention programs that align with the constructs of EI and SEL and that have been shown to decrease bullying and other forms of aggression. EI is commonly defined as the ability to accurately perceive and label emotions in oneself and others; understand the nature, triggers, and consequences of one’s own and others’ emotions; use emotions to facilitate thinking and problem-solving; and manage one’s own and others’ emotions in constructive and

goal-directed ways (Mayer & Salovey, 1997; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume). However, there are other EI models that broaden the definition to also include such social-emotional traits as self-awareness, self-efficacy, empathy, social skills, impulse control, and emotion regulation (Bar-On, 2006; Petrides, 2010; see also Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). In turn, SEL is the applied framework for developing EI-related skills and traits through educational programming (see Chap. 8 by Humphrey, this volume). SEL programs teach students specific skills required for understanding and regulating their emotions and behaviors, identifying and capitalizing on personal strengths and weaknesses, setting and achieving personal and academic goals, feeling and expressing empathy for others, establishing and maintaining rewarding interpersonal relationships, and making socially conscious choices and decisions (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2015).

Etiology of School-Based Bullying

School-based prevention and interventions to reduce bullying are often predicated on theories that assume that bullying involvement stems from an interaction among individual characteristics of youth, peer influences, parental factors, school environment, and societal influences. In order to understand the complex interactions among these systems or structures, scholars and practitioners have drawn upon multiple theories (e.g., social information, social cognition, interactional theories) using the social-ecology framework as an overarching conceptualization (Bronfenbrenner, 1979; Espelage, 2014).

Individual Context

Demographic factors, including age, gender/sex, and race/ethnicity, are frequently examined correlates of bullying. Certain individual characteristics have been implicated in increasing the risk for being a victim of bullying. Boys are victimized more often than girls (Cook et al., 2010; Espelage & Holt, 2001), although this depends somewhat on the form of victimization. Boys are more likely to experience physical bullying victimization (e.g., being hit), whereas girls are more likely to be targets of indirect victimization (e.g., social exclusion) (Cook et al., 2010). One of the few studies that addressed influences of race on bullying found that Black students reported less victimization than White or Hispanic youth (Nansel et al., 2001). Other individual factors increase the likelihood of bullying others. Boys are more likely to bully their male peers than their female peers (Espelage, Green, & Polanin, 2012; Espelage, Holt, & Henkel, 2003), and individuals with behavioral, emotional, or learning problems are more likely to perpetrate bullying than their peers (Rose &

Espelage, 2012). Bullies, particularly male bullies, tend to be physically stronger than their peers. Additionally, Juvonen, Graham, and Schuster (2003) found Black middle school youth more likely to be categorized as bullies and bully-victims than White students. Another study found that the reported incidences of bullying perpetration were slightly higher for Hispanic students than their Black and White peers (Nansel et al., 2001).

Beyond demographics, theoretical models used to explain bullying have included a wide range of constructs that would be consistent with the constructs of EI and SEL. These psychological factors are reviewed below.

Social Information Processing One of the most influential theories explaining children's aggression is the social information processing (SIP) theory (Camodeca & Goossens, 2005; Camodeca, Goossens, Schuengel, & Terwogt, 2003; Crick & Dodge, 1994; Dodge & Coie, 1987). Focusing on the social information processing of individuals who perpetrate bullying or aggression, this theory posits that attribution error, high impulsivity, and poor understanding of others' minds are implicated in the development of bullying behaviors. The SIP model outlines five sequential mental steps involved in social information processing: (1) selective attention and encoding of situational cues, (2) cognitive representation and interpretation of situational cues, (3) clarification of goals, (4) a mental search for possible responses to the situation, and (5) selection of the response. These five mental steps are followed by a sixth behavioral step, the enactment of the response. Research reports that bullies process social information differently than non-bullies, particularly in terms of interpretation of social stimuli and response search, evaluation, and selection. More specifically, bullies are more likely to attribute the cause of another's actions to external factors and to interpret that person's intent to be purposefully hostile (Camodeca et al., 2003; Camodeca & Goossens, 2005). Bullies are also more likely to perceive retaliation as an appropriate response to wrongdoing, feel self-efficacious about behaving aggressively, be confident in their use of verbal persuasion, and decide whether or not to display aggressive behavior based on fear of possible punishment, rather than perceiving their action as wrong (Camodeca & Goossens, 2005). There are many ways in which EI and SEL could foster non-aggressive information processing in the five steps of the SIP model, with the most apparent pathways through empathy, communication skills, and emotion regulation.

Empathy Indeed, empathy is an integral part of social competence (Halberstadt, Denham, & Dunsmore, 2001) and has an inhibitory effect on aggression (Jolliffe & Farrington, 2004). Feshbach and Feshbach (1982) describe empathy as encompassing three components: 1) cognitive ability to discriminate affective cues in others, 2) mature cognitive skills involved in assuming the perspective of another person, and 3) emotional responsiveness to the experience of emotions. Research has found that empathy and perspective-taking skills in youth are associated with less bullying perpetration (Espelage et al., 2012) and greater defender behaviors (Barchia & Bussey, 2011) and, thus, may serve as a more adaptive response.

Communication Skills Understanding the feelings and perspectives of others requires the ability to communicate effectively and assertively (Izard, 2002; Nilsen & Fecica, 2011). Communication involves being able to engage in active listening, which involves the meta-skills of maintaining eye contact, allowing others to talk without interruption, and some indication that you are listening (e.g., nodding). It is also helpful to use reflective statements to confirm the correct message is being received. In many SEL programs, youth learn and practice these skills through dyadic and group activities, a practice that is supported by research in the area of communication (Izard, 2002). Research demonstrates that youth can learn how to effectively communicate and use assertive communication through modeling, feedback, and role playing with adults and peers (Reddy, 2009).

Emotion Regulation Emotion regulation is a developmental challenge for many youth, especially those youth who come from communities and homes where emotion management is not modeled (Silk et al., 2007). Youth who have difficulty managing their emotions are more likely to be targeted as bully-victims and are overrepresented in aggression groups (Schwartz, 2000; Spence, De Young, Toon, & Bond, 2009). Emotional dysregulation among early adolescents often includes youth acting impulsively, which is then associated with an increase in aggression and victimization (Low & Espelage, 2014). Dysregulation of emotions also prevents youth from using effective communication and/or problem-solving strategies (Whitney et al., 2013). Research shows that adolescents can learn how to identify and manage their emotions when they are faced with stressful situations (Brackett et al., 2009). When youth are taught specific cognitive-behavioral strategies to cope with stress and to regulate their emotions, they are less likely to behave aggressively (Botvin, Griffin, & Nichols, 2006).

Because adolescents who bully others have negative past experiences, psychosocial characteristics such as internalizing problems have been considered as critical individual factors. Although high self-esteem appears to be a common psychosocial characteristic of bullies (Cillessen & Mayeux, 2004), internalizing problems – most notably depression – have also been found to predict bullying perpetration over time (e.g., Espelage, Bosworth, & Simon, 2001; Ferguson, Miguel, & Hartley, 2009). Symptoms of depression, including feeling unhappy and having pessimistic attitudes about the future, can make an adolescent irritable, thereby contributing to aggressive behavior toward peers (Roland, 2002).

A positive association has been found between a strong sense of self-efficacy and the ability to cope with stress (Bandura, 1977); it is also plausible that a high level of self-efficacy is positively related to bullying behavior. One study (Natvig, Albrektsen, & Qvarnstrom, 2001) including a sample of 885 Norwegian adolescents explored whether school-related stress experience and self-efficacy were correlated with bullying behavior. Findings suggest that increasing support from teachers and peers, which facilitated coping with school-related stress, decreased the risk of bullying behavior, whereas higher self-efficacy beliefs reportedly increased the risk. Self-efficacy, like the other individual level characteristics discussed, is just one of many contexts that influence a student's potential involvement in bullying.

Peer Context

Peers play a critical role in the initiation and stability of bullying perpetration (Birkett & Espelage, 2015; Espelage et al., 2003; Salmivalli, 2010). Peers can be a source of enormous support for students, but when this peer connection is lacking, this can make incidents of bullying more severe. Additionally, the way classmates respond to bullying has significant effects on whether the bullying continues. Bullying rarely takes place in an isolated dyadic interaction, but instead often occurs in the presence of other students (Espelage et al., 2003). Students may serve to perpetuate bullying by actively joining in or passively accepting the bullying behaviors, or they can intervene to stop bullying or defend the victim (Espelage et al., 2012; Salmivalli, 2010).

Many SEL programs target the peer context for bullying through expanding students' awareness of the full range of bullying behaviors, increasing perspective-taking skills and empathy for students who are bullied, educating students on their influence and responsibility as bystanders, and education and practice on the appropriate, positive responses students can use as bystanders to undermine peer support for bullying. Students are taught and practice a range of positive bystander behaviors, from refusing to provide an audience to directly intervening to stop bullying, which has been shown to increase positive bystander intervention (see meta-analysis by Polanin, Espelage, & Pigott, 2012). By decreasing both active and tacit peer support for bullying, programs focus on removing the bystander support because it is such a critical driver of bullying and other violent behavior.

School-based bullying prevention programs are increasingly focusing their attention on encouraging bystanders to intervene (e.g., students and teachers who are watching bullying situations or know about the bullying). A recent meta-analysis synthesized bullying prevention programs' effectiveness in altering bystander behavior to intervene in bullying situations (Polanin et al., 2012). This meta-analysis indicated that programs were effective at changing bystander intervening behavior, both on a practical and statistically significant level.

Bystander approaches need to consider the developmental trends in victim and bully status. The association between peers and bullying can also look different depending on the age of students (Cook et al., 2010). For younger students in primary school (or elementary), there tends to be a lack of stability for the victim role, while students who engage in bullying tend to remain in this role for a longer, more stable period of time (Schäfer, Korn, Brodbeck, Wolke, & Schulz, 2005). At this age, bullying perpetration seems to be directed at multiple targets, which results in multiple victims and lower stability. The environment of primary schools is such that social hierarchies are not as pronounced; therefore, students will more often confront a bully or retaliate when bullied. By the time students are in secondary school (or middle school), the bully and victim roles are relatively stable (Schäfer et al., 2005). Those students who are in the victim role are less likely to be able to maneuver away from this. In addition, students who occupy the bully role appear to continue to target the same individuals (Schäfer et al., 2005).

Family Context

Bullying behaviors mostly occur in school, and adolescence is a period where youth spend less time with their family and more time with their peers. However, there has been increasing research focusing on the role of the family environment, parenting behavior, and how they can influence adolescent bullying. Family environment influences on adolescent bullying involvement can be explained by several theories, including attachment theory, social learning theory, and family systems theory (Holt, Kantor, & Finkelhor, 2008). Studies that have considered these theories consistently found major differences in the family characteristics of adolescents who are involved in bullying and those who are not. There is empirical evidence that bullies come from homes that are characterized as abusive, conflictual, and dysfunctional (Espelage, Low, Rao, Hong, & Little, 2014; Holt et al., 2008; Low & Espelage, 2014). In contrast, adolescents who report receiving parental support and those whose parents are involved are less likely to engage in bullying (Holt & Espelage, 2007; Wang, Iannotti, & Nansel, 2009). Because parenting can shape children's social-emotional competencies and behaviors and possibly influence bullying behavior, it is not surprising that parents of bullies are described as lacking warmth, lacking parenting skills, hostile, and indifferent (Smokowski & Kopasz, 2005). For that reason, school-based programs that focus on EI and SEL provide opportunities for youth to learn skills that might not be developed at home. Moreover, many SEL programs include parent education and engagement as part of their broader education strategy (CASEL, 2015; see also Chap. 8 by Humphrey, this volume).

School Environment/Climate

School environment is a broad term that encompasses multiple features of school climate or “culture” and, in this chapter, refers to the psychosocial quality and character of school life (i.e., Gottfredson, Gottfredson, Payne, & Gottfredson, 2005). School climate is based on patterns of people's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching, learning, leadership practices, and organizational structures (Cohen, 2013). In a study of 40 countries, Harel-Fisch et al. (2011) analyzed the World Health Organization Health Behavior in School-Aged Children (WHO-HBSC) surveys and found that as negative school perceptions reported by students increased, so did their involvement in bullying as a perpetrator or victim.

Research indicates that bully perpetration and victimization rates are higher, and willingness to intervene is lower, when students perceive adults' prevention and intervention efforts as ineffective (Espelage, Polanin, & Low, 2014; Goldweber, Waasdorp, & Bradshaw, 2013). It has been noted that there are discrepancies between how teachers and staff perceive bullying in comparison to their students. Many teachers are unaware of how serious and extensive the bullying is within their

schools and are often ineffective in being able to identify bullying incidents. Youth with lower levels of school connectedness are also significantly more likely to be involved in bullying and peer victimization (Espelage et al., 2001; Glew et al., 2005; Goldweber et al., 2013). Accordingly, SEL advocates recognize the need for a systemic approach to social-emotional and character education that incorporates SEL principles into teacher training, school culture, and explicit education standards, in addition to classroom-level curriculum (see Chap. 12 by Elias, Nayman, & Duffell, this volume).

School-Based Social-Emotional Violence Prevention Approaches

After the 2011 White House Conference on bullying, state governments in the United States increasingly introduced changes in bully policies requiring most school districts to have bully prevention programs in all K-12 settings. As a result, there has been an increase in a focus on developing and evaluating prevention programs that address bullying involvement. The most comprehensive meta-analysis that applied the Campbell Collaboration Systematic Review procedures (Campbell Collaboration, 2014) included a review of 44 rigorous program evaluations and randomized clinical trials (Ttofi & Farrington, 2011). Ttofi and Farrington (2011) found that the programs, on average, were associated with a 20%–23% decrease in bullying perpetration and a 17%–20% decrease in victimization.

Ttofi and Farrington's (2011) meta-analysis not only showed the amount of reduction achieved in bully perpetration and victimization across program evaluations but also pointed to the components of programs that yielded these reductions. Decreases in rates of *victimization* were associated with the following special program elements: disciplinary (nonpunitive) methods, parent training/meetings, use of videos, and cooperative group work. In addition, the duration and intensity of the program for children and teachers were significantly associated with a decrease in victimization. Interestingly, more elements were needed to bring about changes in bully perpetration. Specific program elements that were associated with decreases in rates of *bully perpetration* included parent training/meetings, improved playground supervision, disciplinary (nonpunitive) methods, classroom management, teacher training, classroom rules, whole-school anti-bullying policy, school conferences, information for parents (ranging from information in newsletter to suggestions for helping children with bullying situations), and cooperative group work. Further, the number of elements and the duration and intensity of the program for teachers and children were significantly associated with a decrease in bullying perpetration (Ttofi & Farrington, 2011).

Successful elements of the programs that are consistent with EI or SEL approaches include use of multimedia, classroom rules, teacher training, psycho-educational information for parents, and cooperative group work. Cooperative

group work, as discussed in the Ttofi and Farrington (2011) meta-analysis, is defined as teachers being trained to implement cooperative learning and role-playing activities to their students around bullying issues. Although anti-bullying programs, more generally, have yielded mixed results, school-based SEL programs that address interpersonal conflict and teach emotion management have succeeded in reducing youth violence, including bullying (see Brown, Low, Smith, & Haggerty, 2011), as well as disruptive behaviors in classrooms (Wilson & Lipsey, 2007). Many of these SEL and social-cognitive intervention programs target common risk and protective factors that have been associated with aggression, bullying, and violence in cross-sectional and longitudinal studies (Cook et al., 2010; Espelage, 2014; Espelage et al., 2003; Espelage et al., 2012), including anger, empathy, perspective taking, respect for diversity, attitudes supportive of aggression, coping, willingness to intervene to help others, and communication and problem-solving skills. Moreover, well-implemented SEL programs produce a variety of other desired outcomes, including improved mental health, greater school engagement, and increased academic grades (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011).

This evidence provides a strong case for adopting a broadband preventive approach such as SEL as part of the overall anti-bullying effort. Below, we provide a brief overview of selected school-based programs for pre-K-12 settings from SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP; http://nrepp.samhsa.gov/01_landing.aspx), which have demonstrated efficacy in reducing bullying and/or improved prosocial behavior by promoting social-emotional learning skills. We end our review with the Second Step: Student Success Through Prevention Middle School Program as an example of how EI and SEL principles can be used in a targeted anti-bullying program.

Early Childhood Programs

The Early HeartSmarts Program for Preschool Children Early HeartSmarts (EHS; Institute of HeartMath, 2008) is an evidence-based curriculum developed for young students ages 3–6 years old. The program is designed to assist teachers in helping their students develop fundamental social-emotional and self-regulatory skills. Teachers deliver 11 lessons (15–20 min in length, two lessons per week) to their students with the goal of helping them develop the skills to understand, regulate, and express their emotions, improve their peer relationships, and cultivate problem-solving abilities. Each of the 11 core lessons is repeated with different examples used in each lesson. Symbolically, the age-appropriate lessons focus on the heart (i.e., using a puppet named Bear Heart), with an emphasis on caring, empathy, and cooperation. The contents of the lessons are founded on concepts in neurobiology and communication between the heart and brain to facilitate the goals of each lesson.

Early HeartSmarts is organized into five main sections aligned with the goals for teachers listed above (Bradley, Galvin, Atkinson, & Tomasino, 2012). The first section is designed to help students to connect the physical and emotional

components of the heart using experiential activities (e.g., listening to heartbeats, conversations with the Bear Heart puppet). Next, students are taught to recognize and understand five basic emotions (happiness, sadness, peace, anger, and fear) through the guided use of emotion-based cards. Then, students begin to practice expressing love and care through dramatization activities. Students then engage in age-appropriate problem-solving scenarios using social scenario cards and conversations with their peers. Finally, students engage in self-regulation techniques using a mind-body breathing activity led by the teacher. At the completion of the curriculum, students should be able to recognize and label their feelings, better control their emotions, and devise strategies to solve difficult situations.

Early HeartSmarts has been assessed by means of The Creative Curriculum Assessment (TCCA; Dodge, Colker, & Heroman, 2001). TCCA is a 50-item teacher-scored assessment that measures their students' social-emotional, language, cognitive, and motor skills development. In regard to social-emotional development, teachers were asked to respond to items in three categories: (1) sense of self, (2) responsibility for self, and (3) prosocial behavior. Bradley, Atkinson, Tomasino, Rees, and Galvin (2009) conducted a quasi-experimental assessment of EHS using TCCA, in which preschool students from 19 schools in Utah received the EHS curriculum (3 schools) or a control curriculum (16 schools) and were assessed at three time points before and after the intervention. At post-intervention, students who received the EHS curriculum had significantly higher scores in the social-emotional domain, as well as in each of its three categories (sense of self, responsibility for self, and prosocial behavior). Additionally, students who received the EHS curriculum also had significantly higher scores than the control group in the remaining TCCA domains (language, cognition, and motor skills). The efficacy of the intervention was also confirmed for the specifically selected target students of lower socioeconomic and ethnic minority backgrounds (Bradley et al., 2012). Although EHS has not been evaluated for its effectiveness to prevent bullying in a longitudinal, carefully controlled study, the evidence presented makes a compelling argument consistent with other social-emotional programs as an early prevention measure for school-based bullying.

Other Preschool Programs Chapter 6 by Denham and Bassett (this volume) reviews three other evidence-based SEL programs for preschool children that have been found to produce positive changes in children's social-emotional skills and social behaviors: the Preschool Promoting Alternative Thinking Strategies (PATHS) program, the Incredible Years preschool curriculum, and the emotion-based prevention program for Head Start children.

K-8 Programs

Open Circle Open Circle (Seigle, Lange, & Macklem, 1997) is an evidence-based SEL curriculum that is appropriate for kindergarten to fifth grade classrooms. With a focus on teaching skills as opposed to directly addressing negative behaviors,

Open Circle employs a whole-school approach, teaching students prosocial skills that can be reinforced by staff and students' families throughout the school day and at home. Teachers deliver 35 lessons (15–30 min in length), two to three lessons per week, to their students with a focus on peer relations, decision-making, and problem-solving. Teachers are asked to sit with their students in a circle with one empty chair, which is designed to remind students that anyone is able to join the circle at any time. In these lessons, students are encouraged to discuss real issues in their lives in a supportive environment. This is designed to encourage positive relationships, practice newly learned skills, and build self-esteem in students.

Open Circle is the central component of the Reach Out to Schools: Social Competence Program (SCP), a primary prevention program focusing on social competency skills for students (Elias & Clabby, 1989; Weissberg, Gesten, Liebenstein, Doherty-Schmid, & Hutton, 1980). The intent of SCP is to develop social-emotional skills to build positive peer relationships. SCP employs implicit social skill instruction with the premise that building relationships, solving problems, and making decisions impact student outcomes (Liem & Martin, 2011; O'Neil, Welsh, Parke, Wang, & Strand, 1997).

Although it has not been evaluated as rigorously as other SEL programs, two empirical studies have shown a positive impact on students' social skills behaviors. In the first study, Hennessey (2007) compared the effectiveness of Open Circle in eight classrooms in matched settings for geographic location and population demographics, four of which received the Open Circle curriculum and the other four were control classrooms. Teachers in both the urban and suburban classrooms receiving the curriculum reported significant improvements in social skills and reductions in problem behaviors, although greater gains overall were reported in urban settings. Specifically, on the Social Skills Rating System Social Skills Questionnaire (SSRS), students receiving the curriculum in urban settings gained about 25 points in social skills and lost nearly 13 points in problem behaviors, compared to about a 6-point gain in social skills and a 1-point decrease in problem behaviors for students in the suburban setting. Both represent significant gains and reductions (respectively) compared to the students who did not receive the intervention. The significant interaction of time by setting by program was attributed to the changes made across the school year in social skills and problem behaviors.

In the second study, Taylor, Liang, Tracy, Williams, and Seigle (2002) surveyed students who received the Open Circle curriculum, and their parents and teachers, in the year following their transition to middle school (1 year after the intervention). The intent was to evaluate the lasting effect of Open Circle through critical periods such as transitions, specifically examining adjustment, and the use of social skills developed in the curriculum. The results showed that participating in the Open Circle curriculum for 2 years in elementary school led to improved social skills, higher levels of adjustment, and lower levels of fighting, compared to students who did not receive the curriculum. Additionally, boys who received the curriculum reported greater perceived self-control and were less involved in physical fights, while girls who received the curriculum perceived themselves as more assertive and had less difficulty with school adjustment. Although the results of both evaluations

of the Open Circle curriculum are promising, carefully controlled, longitudinal studies of the Open Circle are needed to support its overall effectiveness in reducing bullying behaviors.

Cross-Age Mentoring Program (CAMP) for Children with Adolescent Mentors With an emphasis on the constructs of connectedness and perspective taking – two cornerstones of a social-emotional intervention for bullying – CAMP (Karcher, 2000) is a school and community-based program that connects an older (ninth to eleventh grade) mentor with a younger (fourth to eighth grade) mentee in a mutually beneficial relationship. Mentors and mentees are paired in the beginning of the school year and meet for 2 h, three to four times during the school year, and an additional 10 full days during the summer. According to SAMHSA's National Registry of Evidence-Based Programs and Practices (nrepp.samhsa.gov), for both mentors and mentees, the goal of the relationship and structured meetings is to improve students' connectedness to school, the community, peers, and family. Additionally, it is designed to help younger students manage peer pressure, prevent/reduce violent and delinquent behaviors, and enhance academic achievement, while improving self-esteem, civic engagement, self-efficacy, and confidence in older students.

The premise of CAMP is to promote social-emotional and cognitive development in students as a way to foster connectedness and prevent problematic behaviors – a goal shared with SEL programs designed to reduce bullying and adverse health outcomes. Two essential developmental needs are designed to be met by this program: the need for empathy and connectedness. Both of these developmental needs have received attention in the literature as important components of social-emotional programs. Specifically, Mayberry and Espelage (2007) concluded that empathy may have a role in limiting bully perpetration because empathy helps students to begin to accept other students who do not meet social norms. Additionally, social support and connectedness have been suggested to be strong protective factors against bullying and other adverse health outcomes (Holt & Espelage, 2007; McNeely & Falci, 2004; Resnick, Ireland, & Borowsky, 2004).

CAMP has been evaluated several times to assess its effectiveness to improve students' connectedness, self-esteem, and academic achievement. Across a series of studies evaluating the CAMP program (Karcher, 2005; Karcher, 2009; Karcher, Davis, & Powell, 2002), researchers found that mentees' connectedness to their parents increased from pre- to post-intervention in comparison to a control group, whose connectedness decreased, but no other subscales of the Hemingway: Measure of Adolescent Connectedness showed significant changes. In a more nuanced assessment, one study found that at post-intervention, mentors reported greater connectedness to friends, culturally different peers, themselves in the future, and their school (Karcher, 2009). In regard to self-esteem, on six domains of the self-esteem questionnaire (measuring self-esteem in peer relations, school, family, physical appearance, extracurricular, and sports/athletics), CAMP mentors reported significantly more self-esteem at post-intervention in school, extracurricular, and sports/athletics domains (Karcher, 2009). Finally, academic achievement was evaluated in fifth grade students,

whose academic achievement significantly increased from pre- to post-intervention in comparison to a control group (Karcher et al., 2002). Although CAMP has not been empirically evaluated as an anti-bullying program, this evidence-based program meets many of the components consistent with other SEL programs.

Promoting Alternative Thinking Strategies The Promoting Alternative Thinking Strategies (PATHS) program, designed for children in kindergarten through sixth grade, was designated a Blueprints model program by the Office of Juvenile Justice and Delinquency Prevention (Kusche & Greenberg, 1994). The PATHS program is based on the ABCD (affective, behavioral, cognitive, dynamic) model of development and places primary importance on the developmental integration of affect and the development of emotion and cognitive understanding as they relate to social and emotional competence (Kelly, Longbottom, Potts, & Williamsom, 2004). The PATHS curriculum builds from a model of development in which children's behavior and internal regulation is a function of their emotional awareness and control, their cognitive abilities, and their social skills. Specifically, the PATHS model posits that during the maturational process, emotional development precedes most forms of cognitive development (Kelly et al., 2004). Following the universal prevention model, PATHS was developed to integrate into existing curricula. Goals of the program include enhancing social and emotional competence and reducing aggression. Some program components are targeted at parents, but classroom teachers, who are initially trained by PATHS project staff, deliver most of the curriculum. The PATHS framework posits that interventions are most effective when the environment promotes opportunities to use the skills that were learned from the curriculum (Kelly et al., 2004).

The PATHS curriculum consists of 101 lessons divided into three major units, each containing developmentally sequenced lessons to integrate and build from previous lessons (Kusche & Greenberg, 1994). The units include readiness and self-control, feelings and relationships, and problem-solving (Kelly et al., 2004). There is also an additional supplementary unit that contains 30 lessons. Each unit contains aspects of five themes: self-control, emotional understanding, interpersonal problem-solving skills, positive self-esteem, and improved peer communication/relationships. Several randomized trials of PATHS have indicated positive outcomes including a reduction in aggressive solutions to problems and increases in prosocial behaviors (Greenberg et al., 2003).

Al's Pals: Kids Making Healthy Choices Al's Pals: Kids Making Healthy Choices is a school-based prevention program to develop social-emotional skills in children, ages 3 through 8 years (Lynch, Geller, & Schmidt, 2004). Al and his pals are puppets, and the program utilizes dialogue, music, and age-appropriate teaching approaches in a curriculum focused on feelings and behavior, creating and maintaining a positive classroom environment, conflict resolution, bullying behavior, and making healthy choices. The program consists of a year-long, 46-session interactive curriculum delivered by trained classroom teachers. Ongoing communication with parents is also a component of Al's Pals, and teachers are encouraged to send

parents letters to update them about the skills their children are learning, suggest home activities to reinforce these concepts, and inform parents about their child's progress.

To date, 135 evaluation studies have been conducted of AI's Pals in the United States involving more than 24,500 children across 1665 classrooms. Children who participated in AI's Pals showed statistically significant improvements in prosocial behaviors, social independence, and problem behaviors (Lynch et al., 2004; Lynch & McCracken, 2001). Children who participated in AI's Pals also showed statistically significant improvements in antisocial/aggressive and social withdrawal behaviors (Lynch et al., 2004, Lynch & McCracken, 2001).

4Rs The 4Rs program (Reading, Writing, Respect, and Resolution) provides read-alouds, book talks, and sequential, interactive skills lessons to develop social and emotional skills related to understanding and managing feelings, listening and developing empathy, being assertive, solving conflict creatively and nonviolently, honoring diversity, and standing up to teasing and bullying (Brown, Jones, LaRusso, & Aber, 2010). 4Rs is a grade-specific program available for students in prekindergarten through eighth grade. Divided into seven units, each grade has approximately 35 lessons, and units also include extension activities, infusion ideas, recommendations of other books, and 4Rs activity sheets to reinforce students' understanding (Brown et al., 2010). The 4Rs program reinforces skills and concepts covered in each unit with a family connection activity that students take home to complete with their caregivers and 4Rs "family connections" parent workshops.

A study evaluating the 4Rs program found that it had a positive effect on students' social and emotional competency, students' behavior, attendance, academic performance, and classroom climate (Brown et al., 2010). This study was unique in that it followed children's development over several years and employed an experimental random assignment design. The researchers tracked the development of a cohort of third grade students in 18 New York City public elementary schools. Sixty-one percent of the children were from families at or below the poverty level, 45% were Latino, and 41% were African-American (Brown et al., 2010). Nine schools were randomly assigned to implement the 4Rs school-wide, and the other nine schools were control schools receiving no 4Rs intervention. After 2 years of the 4Rs, compared to children in the control schools, children in the 4Rs schools showed lower levels of teacher-reported aggression, less tendency to ascribe hostile motives to others in ambiguous social situations, fewer symptoms of depression, fewer symptoms of attention and hyperactivity problems, and increases in social competence. Children in 4Rs schools who were judged by their teachers at the start of the study to be at greatest behavioral risk showed significant improvement in attendance, academic skills, and scores on standardized reading and math achievement tests (Brown et al., 2010).

Positive Action (PA) Positive Action (Flay & Allred, 2010) is a school-based program that focuses on social-emotional and character development and social skill development among children and adolescents from grades K-12. The program's goal is to promote positive action (intellectual, physical, emotional development), prevent substance abuse and disruptive behavior, and enhance school

performance. Lessons consist of a K-12 classroom curriculum, drug education and conflict resolution supplements, self-training kits for school preparation and teacher training, school-wide climate development, counselors for students, and family classes for parents. The program focuses on six core concepts: (1) self-concept, (2) positive actions for body and mind, (3) positive actions focusing on getting along with others, (4) emotion and self-management, (5) being honest with oneself, and (6) continually improving oneself. Lessons are taught by classroom teachers in 15- to 20-min sessions for a total of 35 h throughout the school year. This is achieved through adults (teachers, administrators, parents) reinforcing youth's positive action.

Teachers and students are both given the "Thought-Action-Feelings about Self" poster to help them understand the theory of self-concept: that thoughts lead to actions, actions lead to feelings, and feelings lead to thoughts. Teachers are also given a kit to plan 15-minute activities and lessons for their students for 4 days of the week. The kit includes scripted lessons, suggested activities (e.g., role-playing, plays, games, music, stories, question-and-answer, etc.), and teaching methods (e.g., role-modeling positive behaviors and reinforcement of positive behaviors). School principals are given the Climate Development Kit to learn about promoting a positive school climate, and they are responsible for appointing the school's PA Committee, coordinating training, and monitoring the progress of each grade level, to make sure the rates of teaching and learning concepts are the same. A counselor and family component are also included. The family and counselor both receive lesson kits, consisting of 36 lessons to correspond with the number of weeks in a school year. The family's kit for parents is parallel to those used by teachers at school, whereas the counselor's kit primarily focuses on education, mentoring, and peer tutoring. The PA program is administered for 3 years by a program developer, who trains teachers/staff for 3–4 h before the first year, and then 1–2 h in each of the subsequent years. They also visit schools at least once per year to provide an in-service training session and hold a mini-conference each February to train a small representative group of teachers from each school.

Results of a large-scale randomized clinical trial of the PA program showed significant reductions in violent behavior, substance use, and bullying (Li et al., 2011). More specifically, approximately 510 third grade students from 14 Chicago Public Schools' elementary schools participated in this evaluation. Approximately 46% of the students identified themselves as African American, 27% identified as Hispanic, 17% identified as other or mixed, 7% identified as White, and 3% as Asians. Schools were randomly assigned to receive the PA program ($n = 7$) or a control condition ($n = 7$). Schools in the PA group received a K-8 curriculum, training, and materials. Through survey questions, students were assessed on lifetime substance use and serious violence perpetration. Bullying and disruptive behavior were measured using the Aggression Scale and the Frequency of Delinquency Scale. Students were assessed at baseline, end of year 1 (end of third grade), beginning of year 2, end of year 2 (end of fourth grade), and end of year 3 (end of fifth grade). At the end of year 3 (at the completion of the program), students in the PA group had significantly fewer endorsements of items relating to substance use (31% reduction), serious

violence (37% reduction), and bullying behaviors (41% reduction), when compared with the control group.

RULER Approach The RULER approach is designed for kindergartners through eighth graders to promote emotional abilities in recognizing, understanding, labeling, expressing, and regulating emotions, which are known as the “RULER” skills (Hagelskamp, Brackett, Rivers, & Salovey, 2013; see also Chap. 7 by Hoffmann, Ivcevic, & Brackett, this volume). The objective is for emotions to become central to learning, teaching, and parenting. In order to achieve this, adults first learn the four anchors: Charter, Mood Meter, Meta-Moment, and Blueprint. These evidence-based tools are implemented to help children and adults develop their EI skills. The Charter is created by members of the community to define how they aspire to treat each other. The Mood Meter allows students and educators to become more mindful of how their emotions change throughout the day and how their emotions then affect their actions. The Meta-Moment is a brief step back from the situation when the individual is encouraged to pause and think before acting. Finally, the Blueprint helps students and educators manage conflict effectively by considering a disagreement from the other person’s perspective, as well as their own. RULER has an interactive training program for adult family members to assist with the pull-through of concepts learned in the classroom and to promote social and emotional development at home.

RULER has been evaluated in a randomized controlled trial of 273 participants in the fifth and sixth grades. The results showed improved academic performance, increased positive social behavior, improved academic behaviors, and improved school climate (Rivers, Brackett, Reyes, Elbertson, & Salovey, 2013). In a separate clustered randomized controlled trial, 62 schools either integrated RULER into fifth and sixth grade English Language Arts (ELA) classrooms or served as comparison schools, using their standard ELA curriculum only. Multilevel modeling analyses showed that compared to classrooms in comparison schools, classrooms in RULER schools were rated as having higher degrees of warmth and connectedness between teachers and students, more autonomy and leadership among students, and teachers who focused more on students’ interests and motivations (Rivers et al., 2013).

K-12 Programs

The Olweus Bully Prevention Program The Olweus Bully Prevention Program (OBPP; Olweus et al., 1999) was first implemented in Norway schools and focuses on reducing existing bullying concerns, preventing new incidents of bullying, and improving school climate and peer relationships (Limber, Riese, Snyder, & Olweus, 2015). Program elements focus on restructuring the school environment to minimize the opportunities and rewards for bullying behavior, to shift social norms to create expectations of inclusion and civility, and to build a sense of community

among students and adults in the school (Limber et al., 2015). OBPP is based on the need for adults in the school environment to show warmth and positive interests and to be involved with the students, to set firm limits, to consistently use nonhostile negative consequences when rules are broken, and to function as authorities and positive role models (Limber et al., 2015). Typically, the components of the program are implemented across the entire school and include specific interventions that are directed at the different level of school's ecology, including hallways, classrooms, individuals, and parents (Limber et al., 2015).

There have been many evaluations of the OBPP conducted in many different countries, and the data are limited in the United States (Espelage, 2013). The studies have produced mixed results, including both positive and negative (null) results (Limber et al., 2015).

KiVa National Anti-Bullying Program in Finland The KiVa program, developed in Finland for elementary through high school students, is a universal school-based program that addresses bullying at school by working with teachers, parents, families, community leaders, and students. Teacher training, student lessons, and virtual learning environments are all critical components of this multicomponent program (for review, see Salmivall, Karna, & Poskiparta, 2010). Teachers use a manual for classroom instruction, which is supplemented by an anti-bullying computer game for primary school children and an Internet forum "KiVa Street" for secondary school students. On "KiVa Street," students can access information pertaining to bullying or watch a short film about bullying. Both the anti-bullying computer game and the Internet forum are designed to provide opportunities for youth to practice skills learned in the lessons and apply them in different scenarios. The KiVa program has been shown to produce significant decreases in self-reported bullying and self- and peer-reported victimization in fourth to sixth graders (Kärnä et al., 2011) and increases in empathy and anti-bullying attitudes.

Facing History and Ourselves Facing History and Ourselves is a social studies or history curriculum at the middle and high school level that focuses on historical examples of intergroup conflict involving racism and prejudice (Schultz, Barr, & Selman, 2001). The program helps students develop awareness of self and others and build relationship skills through classroom activities, while at the same time learning social studies and history. The program promotes awareness and respect for diversity. Its teaching practices help teachers create a supportive and democratic classroom environment that fosters civic learning and social and ethical reflection (Schultz et al., 2001).

In 2015, Facing History and Ourselves was one of only nine programs in the United States that had a proven positive effect on students, such as improved academic performance, increased empathy, and increased prosocial behavior (CASEL, 2015). It subsequently received top honors out of 400 nominated programs that are specifically targeted toward middle and high school students (CASEL, 2015). A comprehensive body of research focused on this program has consistently demonstrated its significant influence on three areas: teacher effectiveness and professional satisfaction, student achievement and civic engagement, and school climate and culture (Schultz et al., 2001).

Positive Behavioral Supports Framework and Bullying Prevention The Positive Behavioral Supports (PBS; Sugai & Horner, 2006) framework focuses on universal school-wide programs to prevent problematic behaviors and promote a positive school climate. This framework lends itself well to bullying prevention campaigns. Ross, Horner, and Stiller (2009) created Bullying Prevention in Positive Behavior Supports (BP-PBS) in order to integrate bully prevention within the PBS framework. It is designed specifically to (a) define and teach the concept of “being respectful” to all students in a school, (b) teach all students a three-step response (stop, walk, talk) that minimizes potential social reinforcement when they encounter disrespectful behavior, (c) pre-correct the three-step response prior to entering activities likely to include problematic behavior, (d) teach an appropriate reply when the three-step response is used, and (e) train staff on a universal strategy for responding when students report incidents of problem behavior (Ross et al., 2009). Research supports the addition of BP-PBS to a school’s system of PBS as it was related to a reduction in the number of incidents, variability, and trend of problem behavior in a targeted sample (Ross et al., 2009). These effects were coupled with an increase in appropriate bystander and victim responses, which may have reduced the likelihood that aggression resulted in peer reinforcement (Ross et al., 2009).

Another model based on this framework that has been rigorously evaluated is the School-Wide Positive Behavioral Interventions and Supports (SWPBIS). For schools that implemented SWPBIS, the typical escalation of bullying incidents and peer rejection decreased as students approached middle school (Waasdorp, Bradshaw, & Leaf, 2012). Although it is difficult to determine the exact components of SWPBIS that accounted for these findings, there are specific activities implemented through SWPBIS that likely reduce bullying perpetration, such as promoting a positive, respectful school environment, positive reinforcement of desired behaviors, and consequences for inappropriate behaviors (Waasdorp et al., 2012). Furthermore, the improved school climate and overall reductions in student discipline problems observed in schools with the SWPBIS model may contribute to a more positive school environment, which also has been linked to reductions in bullying (Espelage, Polanin, & Low, 2014).

Second Step: Student Success Through Prevention (SS-SSTP) Middle School Program

The Second Step© (Committee for Children, 2008) is designed for sixth through eighth graders and covers similar social-emotional targets (e.g., empathy, communication skills, problem-solving, bully prevention, friendship skills, harassment, emotion regulation, alcohol and drug prevention) across the grades, but the context increases in complexity from one grade level to the next. Fifteen lessons are delivered in sixth grade, and 13 lessons are delivered at the seventh and eighth grade levels. Each lesson is designed to take one 50-minute session or two 25-minute

sessions. Prior to implementation, teachers in the intervention condition complete a 4-hour training that covers several areas. First, the research on bully prevention and social-emotional learning is reviewed in order to help the teachers understand the rationale for the project. Second, teachers are given the intervention kits, and the trainer takes them through several lessons in order to demonstrate that they could be successful in implementing the program. Finally, teachers are given specific implementation strategies to maximize fidelity.

The SS-SSTP lessons include direct instruction in risk and protective factors linked to aggression and violence, including empathy training, emotion regulation, communication skills, and problem-solving strategies. Drawing on Bandura's (1979) social learning theory, lessons are skills-based and students receive cueing, coaching, and suggestions for improvement on their performance. Lessons are supplemented by homework that reinforces the instruction, extension activities, academic integration lessons, and videos, which are practices that are associated with greater skill acquisition. The use of group and collaborative work also leads to increased skill acquisition by allowing students to practice new skills in an environment of positive peer support. Again, a recent meta-analysis supports this practice of using a direct approach to address barriers to helping others and then teaching and role-playing strategies of effective bystander intervention (Polanin et al., 2012). Also, in the seventh grade curriculum, youth learn how sexual harassment differs from flirting, their school's sexual harassment policy, and learn assertive skills to refuse sexual harassment. The SS-SSTP lessons are scripted and highly interactive, incorporating small group discussions and activities, class discussions, dyadic exercises, whole class instruction, and individual work. Lessons are supported through an accompanying DVD, which contains media-rich content including topic-focused interviews with students and video demonstrations of skills. Indeed, video has been found to be one element of efficacious programs (Tofi & Farrington, 2011).

In a large randomized clinical trial of over 3600 students across 36 middle schools, reductions in fighting were found after the sixth grade curriculum (Espelage, Low, Polanin, & Brown, 2013), sexual harassment and homophobic name-calling were reduced after 2 years of implementation (Espelage, Low, Polanin, & Brown, 2015), and bullying, homophobic name-calling, and cyberbullying were reduced after 3 years of implementation (Espelage, Van Ryzin, Low, & Polanin, 2015). Bully perpetration was also reduced for students with disabilities in the Second Step condition compared to students with disabilities in the control condition (Espelage, Rose, & Polanin, 2015). Furthermore, when teachers spent more time prepping the lesson and prepared the lesson as a group, reductions were found in a global statistic of aggression, including bullying (Polanin & Espelage, 2014).

Summary

Etiological theories of bullying suggest that youth become engaged in bullying through a complex interaction between individual and contextual factors. Social-emotional factors such as emotional regulation, empathy, coping strategies,

problem-solving, and communication skills have been found to be associated with less bullying involvement. Therefore, school-based programs to reduce bullying should promote these skills in youth through SEL activities. However, these programs need to be tailored such that components are aligned with the developmental context of the target population (Yeager, Fong, Lee, & Espelage, 2015). In this chapter, bullying was defined and presented as a serious public health concern that schools and communities need to address. Effective prevention programs are those that approach bullying involvement in youth from a wide range of approaches, including fostering EI competencies through SEL approaches, focusing on the school climate and teacher training around bullying issues, and addressing bullying from a developmental lens. Selected programs from SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP; http://nrepp.samhsa.gov/01_landing.aspx) were described for pre-K-12 settings. Although not an exhaustive list of evidence-based programs, these programs have demonstrated efficacy in reducing bullying and/or improving prosocial behavior through promoting social-emotional skills. Given the added benefits of these programs in improving a variety of other desired outcomes (e.g., mental health, academic performance) besides reducing bullying, the broadband SEL approach to bullying prevention, which targets common risk and protective factors, might be more advantageous relative to narrower bullying-specific initiatives. What's needed now is more research evaluating the efficacy of existing SEL programs in relation to bullying-specific outcomes, as well as tailoring those programs to maximize their impact on bullying reduction and prevention.

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Chapter 10

Emotional Intelligence in Atypical Populations: Research and School-Based Interventions



Janine Montgomery, Adam McCrimmon, Emma Climie, and Michelle Ward

Abstract Current educational trends reflect an increased focus on developing social and emotional competencies of school children as a means of reducing underachievement and school violence and promoting positive development and well-being. Atypically developing children—those with a diagnosed mental health condition, intellectual exceptionality, or history of maltreatment—are at an increased risk for experiencing academic, social, and/or emotional difficulties. Further, the challenges associated with atypical development may impede the acquisition and/or application of core socioemotional skills. In this chapter, we provide an overview of the current research on emotional intelligence (EI) and social-emotional learning (SEL) with an explicit focus on students' mental health. After briefly outlining the concepts of SEL and EI, we review relevant research with several atypical populations, including children with Autism Spectrum Disorder, Attention-Deficit/Hyperactivity Disorder, Specific Learning Disorder, intellectual giftedness and disability, history of maltreatment, or behavioral and social-emotional difficulties. Descriptions of selected SEL and mindfulness-based school programs that target socioemotional competencies of both children and teachers are presented, followed by a discussion of their utility and challenges in addressing the needs of both typical and atypical learners.

Given the popularity of Daniel Goleman's (1995) model of emotional intelligence (EI), in conjunction with the popularity and use of methods reflecting Howard Gardner's (1983) "multiple intelligences" in schools, it appears that teachers are increasingly seeking alternate ways to understand and address student strengths and needs. "How we experience and manage our feelings is central to how effectively

J. Montgomery (✉) · M. Ward

Department of Psychology, University of Manitoba, Winnipeg, MB, Canada
e-mail: Janine.Montgomery@umanitoba.ca; umward23@myumanitoba.ca

A. McCrimmon · E. Climie

Werklund School of Education, University of Calgary, Calgary, AB, Canada
e-mail: awmccrim@ucalgary.ca; eaclimie@ucalgary.ca

we learn” (Shelton, 2003, p. 1) and, indeed, is central for understanding how students learn. Just as the popularity of Goleman’s and Gardner’s work has set the stage for viewing children more holistically, current educational trends provide additional context for understanding not only academic but social-emotional strengths and needs. Twenty-first-century educators note the need to address underachievement, dropout rates, increasing mental health issues, and school violence and bullying in school settings (see Matthews, Zeidner, & Roberts, 2012 for a review of these issues; see also Chap. 12 by Elias, Nayman, & Duffell, this volume). Accordingly, interventions that aim to increase social-emotional competencies may be one route to addressing these problems.

The concept of “social-emotional learning” (SEL) was coined due to the need to translate research in EI to a more applied school-based setting. This term reflects the key role that both social and emotional factors play in the academic environment and their importance in ensuring that children build a healthy social-emotional foundation in addition to a strong academic basis (Elias, 2004; Elksnin & Elksnin, 2004). Investing in SEL is a high-impact, low-cost way to improve social and academic skills, quality of life, overall happiness, and well-being (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011), in addition to preventing school violence and bullying (Smith & Low, 2013; Snyder et al., 2013; see also Chap. 9 by Espelage, King, & Colbert, this volume), among other benefits. Indeed, students and school staff with and without mental health conditions may benefit from EI approaches to understanding, assessing, and intervening. EI models can provide a useful framework for this purpose. The benefits of well-developed EI are clearly documented and predict a variety of academic, pro-social, and positive wellness behaviors and adaptive coping skills (see Payton et al., 2008 for a review). In addition, an emerging literature base indicates that EI can improve with training (Nelis et al., 2011; Dacre Pool & Qualter, 2012) and can lead to improved outcomes (Durlak et al., 2011; Payton et al., 2008). The fact that social-emotional skills predict academic competencies demonstrates its importance in schools where programming focuses primarily on academic development, as EI can facilitate better achievement (Parker et al., 2004; Petrides, Frederickson, & Furnham, 2004). As such, integrating social-emotional learning in schools can benefit not only student and teacher personal development but also improve academic outcomes, making the approach essential for twenty-first-century learning.

Current trends in addressing individual needs set the stage for better understanding of the whole child in relation to academic outcomes. For example, the increased use of and focus on differentiated instruction, where teachers identify student needs and respond with appropriate individualized instruction, can be compatible with social-emotional interventions. Identifying student needs prior to instruction is a critical prerequisite of individualizing instruction. Using EI assessment and intervention tools can provide a research-based anchor in this process that is compatible with academic goals. Likewise, using a tiered approach where students are given appropriate instruction and assessment at differing levels (i.e., primary, secondary, and tertiary) is also compatible with EI approaches and may be useful for schools to use within existing widely accepted frameworks.

Given that one in five Canadians and Americans will have mental health problems in their lifetime (Health Canada, 2006; Merikangas et al., 2010) and 70% of those cases will begin in childhood (Public Health Agency of Canada, 2006), there is increased onus on schools to address social-emotional health throughout development. The increased concerns over mental health issues, violence, dropout rates, and substance use (Elias, Kress, & Hunter, 2006) provide further impetus for addressing these issues in schools. Further, contemporary schools face a variety of demands and challenges (including larger classrooms, increasing diversity, increasing demands on instructional time, teacher stress, and job burnout) that make the focus on social-emotional learning (for staff and students) critical. EI and SEL approaches are beneficial not only for vulnerable children who demonstrate mental health problems in the areas but also for the general population in terms of focus on balance, wellness, and optimal learning environments. For these reasons, this chapter provides an overview of the current knowledge of EI and related concepts (like SEL) for both typical and atypical students. Information on concepts, theories, and research in several atypical populations is presented. Further, descriptions of some available programs that target SEL and EI specifically are presented to enable an understanding of how they can be practically integrated in school settings.

SEL in the North American Context

The SEL principles are seeing an increasing uptake in educational policies and practices across North America (see Chap. 12 by Elias et al., this volume). In the United States, the government has mandated SEL with the passing of H.R. 497: The “Supporting Social and Emotional Learning Act” (2015), which requires teachers to have “preparation in the understanding, use, and development of social-emotional learning programming” (p. 1). This Act asserts:

a positive, healthy school environment where children thrive and grow, both intellectually and emotionally, takes purposeful and thoughtful planning. Students who develop personal strengths—like grit, perseverance, concern for others, and positive academic mindsets—become important contributors to their school and community. Schools have a responsibility to nurture the intrapersonal and interpersonal skills students need to navigate social situations and effectively and respectfully communicate with a diverse group of people. (p. 2)

The Act further asserts the need for a balance between social-emotional and intellectual learning and introduces a requirement for research and development in applications for schools. Further, a US-based consortium, the Collaborative for Academic, Social, and Emotional Learning (CASEL, see www.casel.org), is a key resource that aims to provide evidence-based information on programs and approaches addressing social, emotional, and academic interventions. The existence of this consortium reflects recent growth in this area and a need for science-based approaches to school programming.

While Canadian educational systems are not federally legislated—as provinces are responsible for curriculum leadership—many school divisions train their staff and students in SEL programming. Training and programming tend to be idiosyncratic and few generalizations can be drawn for the Canadian context other than to say that there is increased focus on these outcomes. A recent report on SEL in Canada indicated that many Canadian provinces are beginning to focus on SEL and that teachers are increasingly requesting and attending SEL professional development sessions (Carthy Foundation & Max Bell Foundation, 2013). The report recommended that SEL approaches go beyond school settings to build on the recognition that families and communities contribute significantly to social-emotional development, as such cross-sectoral and multidisciplinary work is key.

Some Canadian provinces explicitly promote the incorporation of SEL principles in schools. For example, the province of British Columbia has adopted a new K-12 curriculum focused on three core competencies essential for all learners: thinking, communication, and personal and social competency (see <https://curriculum.gov.bc.ca>). Further, a resource for teachers has been developed out of the University of British Columbia to help identify evidence-based SEL resources for schools that include relevant peer-reviewed articles and practical resources for schools (see <http://www.selresources.com/sel-resources/>). The emergence of new resources and curriculum development suggests an interest and need in Canada, as well as a growing recognition of the importance of SEL in schools.

An Overview of EI

Recognition of emotions in others and ourselves is a critical social skill that significantly contributes to overall psychological competence and well-being (Davis & Humphrey, 2014; Mavroveli, Petrides, Rieffe, & Bakker, 2007) and allows individuals to function better in everyday settings. This capacity to process emotional information and apply it across a variety of situations is a central aspect of the construct of EI (Petrides & Furnham, 2003). In essence, EI is concerned with guiding behavior through social interactions by allowing individuals to integrate, comprehend, and apply emotional information realistically (Mayer, Salovey, & Caruso, 2008; Petrides & Furnham, 2003).

The idea that emotions contribute to intelligence is a relatively recent perspective, although it can be traced to theories of personality and social intelligence from the twentieth century (see Montgomery et al., 2008). EI emerged as an independent construct in the early 1990s, and is considered adaptive and important for overall adjustment (Mayer, DiPaolo & Salovey, 1990; Stough, Saklofske, & Parker, 2009a). The field of EI has since grown into the construct we know it to be today. Presently, EI is seen as a broad construct reflecting the ability to process emotional information about one's self or others and to use this information to guide behavior and think in the context of real-life interactions effectively (Mayer, Salovey, & Caruso, 2008). The development of the construct has resulted in the

emergence of specific theoretical approaches that utilize unique measures to evaluate different operational facets of EI (Montgomery et al., 2008).

EI Models

At present, several models of EI have been developed, although these models primarily fall under two general theoretical categories: ability EI and trait EI (Stough et al., 2009b). Both approaches share connections to personality and cognitive ability, though each framework assesses these qualities from a unique perspective.

Ability EI Advocates of ability EI define the construct as a form of intelligence consisting of skills that combine emotions with cognition (Davis & Humphrey, 2014; Papadogiannis, Logan, & Sitarenios, 2009). It describes an individual's knowledge, recognition, and relations regarding emotions, and the ability to problem solve using this information (Montgomery, McCrimmon, Schwan, & Saklofske, 2010; Montgomery, Stoesz, & McCrimmon, 2013). Ability EI has been shown to demonstrate some evidence of construct validity, particularly regarding its distinction from personality (MacCann, Roberts, Matthews, & Zeidner, 2004). However, some have argued against the model as the tools for its measurement rely upon "correct" answers to items that are not always agreed upon (MacCann et al., 2004). Typically, consensus scoring is used to determine the responses for various items, a process that involves defining the answers based on the majority response of a group (MacCann et al., 2004). An alternative "expert scoring" method can also be used, where the correct answers are determined by a group of experts in the field of EI. However, the title of "expert" is ambiguous in that no defined criteria exist to determine who the experts may be (MacCann et al., 2004). As well, a significant problem exists regarding the distributions of scores with consensus scoring, which are less consistent and reliable in comparison with expert scoring (MacCann et al., 2004). Essentially, while ability EI seeks to measure people's knowledge of emotions via performance, there are limitations to the model, particularly regarding assignment of correct and incorrect answers to items (Brody, 2004; MacCann et al., 2004). However, despite these limitations, ability EI has been found to predict important social outcomes (see Mayer, Roberts, & Barsade, 2008) and is considered useful to understand everyday thinking patterns related to successful navigation of emotional situations. For further critical discussion of the ability EI model, please see Chap. 2 by Fiori and Vesely-Maillefer (this volume).

Trait EI Trait EI is an alternative framework that describes EI as emotional dispositions of self-perceptions associated with other personality traits (Davis & Humphrey, 2014; Farrelly & Austin, 2007; Petrides, 2009). Trait EI differs from ability EI in that it examines self-observed behavioral dispositions and abilities and considers application of knowledge and awareness of emotions to the real world (Montgomery et al., 2008). Trait EI is evaluated through self-report of emotionally related personality traits and self-perceptions (Petrides, 2009; Wood, Parker, & Keefer, 2009).

Evaluating the validity, reliability, and overall effectiveness of trait EI is critical to applying it practically in the real world. Specifically, two goals of trait EI research are to understand the development of the concept across the life-span and to inform scientifically based intervention programs (Davis & Humphrey, 2014; Frederickson et al., 2012). These are important to areas of atypical development, particularly neurodevelopmental disorders such as autism spectrum disorder (ASD), where social and emotional characteristics can create a barrier to meaningful relationships and everyday functioning.

Regardless of the measurement system used, trait EI as a construct has considerable validity across a number of empirical studies (Mavroveli et al., 2007; Montgomery et al., 2008). More specifically, trait EI is strongly related to the major personality dimensions, allowing it to predict qualities such as coping styles, truancy, and academic achievement (Mavroveli & Sánchez-Ruiz, 2011). In comparison with ability EI, trait EI has shown stronger predictive validity for a number of life outcomes (Petrides, 2009). It may also be more closely related to everyday performance than ability EI (Montgomery et al., 2013). For further discussion of trait EI in the education context, please see Chap. 3 by Petrides, Sánchez-Ruiz, Siegling, Saklofske, and Mavroveli (this volume).

Assessment of EI in Children and Adolescents

The assessment of EI abilities and traits in adults has received much attention, and there are a broad number of measures that can be utilized to understand ability EI and trait EI skills in the adult population (Stough, Saklofske, & Parker, 2009b). However, there are fewer rigorously standardized measures that focus solely on school-aged children and those that do exist are typically adaptations from adult measures. Additionally, there are generally more measures that examine trait EI and fewer that focus on ability EI. The following section outlines the EI assessment tools that may be used to better understand a child's EI level in both the trait and ability domains.

Ability EI There are limited measures, both for children and adults, that allow for examination of ability EI. Most of these measures assess narrow abilities pertaining to a single EI domain, such as emotion recognition or emotion management (for a review, see Chap. 2 by Fiori and Vesely-Maillefer, this volume). In fact, there is only one omnibus measure of ability EI for children—the Mayer-Salovey-Caruso Emotional Intelligence Test: Youth Version (Mayer, Salovey, & Caruso, 2014).

Mayer-Salovey-Caruso Emotional Intelligence Test—Youth Version The Mayer-Salovey-Caruso Emotional Intelligence Test—Youth Version (MSCEIT-YV; Mayer et al., 2014) is a 102-item performance-based measure completed online, assessing a youth's (ages 10–17 years) ability EI. The MSCEIT-YV provides a total ability EI score, as well two area scores (strategic and experiential) and four branch scores.

The experiential EI area is comprised of the facilitating thought and perceiving emotions branches, while the strategic EI area encompasses the managing and understanding emotions branches.

The perceiving emotions section requires the student to rank along a standardized scale the extent to which photographed facial expressions suggest certain emotions (e.g., surprise, anger, disgust). The facilitating thought section requires the participant to rank along a standardized scale the extent to which a particular emotion (e.g., “excited”) is similar to various tactile, color, and taste sensations (e.g., warm, heavy, dark, pink). The understanding emotions section requires the participant to read a description of a situation (e.g., “When you have something really nice, and then you lose it, you end up feeling...”) and to select the answer choice representing the most accurate complex feeling (e.g., jealous, disgusted). Finally, the managing emotions section requires the participant to read brief scenarios (e.g., “A boy received some very sad news. He wants to feel happy before going to a fun party. How helpful would each of the following be in getting the boy to feel happy?”) and to rank the degree of constructiveness of each presented possible solution (i.e., “not very helpful” to “very helpful”).

As the MSCEIT-YV is a test of ability, participants’ responses are evaluated and scored according to a criterion of correctness rather than relying on a self-evaluation. Specifically, the MSCEIT-YV items are scored according to the preset scale ranging from zero (less correct) to two (more correct), and the sum of the respective items yielded from the branch, area, and total MSCEIT-YV scores. Psychometrically, two independently conducted examinations of validity found support for the construct validity of the MSCEIT-YV (Cha & Marin, 2009; Peters, Kranzler, & Rossen, 2009). Specifically, Peters and colleagues reported that the MSCEIT-YV demonstrated moderate correlations ($r = 0.42$) with theoretically related dimensions of trait EI but appropriately diverged from the unrelated trait EI dimensions. This indicates a small overlap between the ability and trait EI models but also speaks to the uniqueness of each approach.

Trait EI There has been a greater emphasis on the creation of trait EI measures for children (for a review, see Chap. 3 by Petrides et al., this volume). However, two measures are the focus of most research in child-based trait EI.

Bar-On Emotional Quotient Inventory: Youth Version The Bar-On Emotional Quotient Inventory: Youth Version (EQ-i:YV; Bar-On & Parker, 2000) is a self-report measure that examines the level of emotional and social functioning in children and adolescents aged 7–18 years. This measure is available in both long (EQ-i:YV; 60 items) and short (EQ-i:YV-S; 30 items) forms. The EQ-i:YV can be used to identify a child’s strong and weak areas and help develop their socioemotional skills. Questions are answered using a four-point Likert scale, for example, a score of one would indicate that the statement is “not true of me (never, seldom)” whereas a score of four indicates that it is “very much true of me (very often).”

The EQ-i:YV reports a total emotional quotient (EQ) score as well as four EI subscales: intrapersonal, interpersonal, stress management, and adaptability.

The intrapersonal scale consists of questions related to emotional self-awareness, assertiveness, self-regard, self-actualization, and independence and includes statements such as “It is easy to tell people how I feel.” The interpersonal scale examines empathy, social responsibility, and interpersonal relationships (e.g., “I care what happens to other people”). The stress management scale consists of two related abilities: stress tolerance and impulse control. Questions in this scale include items such as “I get too upset about things.” The adaptability scale examines reality testing, flexibility, and problem-solving and includes items such as “I can come up with good answers to hard questions.” In addition to the four EI scales, the EQ-i:YV contains three complementary scales that are not included in the global EQ score: general mood, positive impression, and inconsistency. The general mood scale is a measure of positive emotionality and well-being. The positive impression and inconsistency scales provide insight into the participant’s pattern of responses and identify those that may be creating an overly favorable impression of themselves or responding in a random fashion (Bar-On & Parker, 2000).

Psychometrically, the EQ-i:YV has adequate reliability and validity. Specifically, internal consistency is acceptable, with Cronbach’s alpha coefficients on the total EQ and subscales ranging from 0.65 to 0.87 across ages and gender. Test-retest (3 weeks) reliability coefficients also range from 0.77 to 0.88, indicating excellent reliability. Regarding validity, the EQ-i:YV demonstrates low to moderate intercorrelations between subscales and composite scores ($r = 0.17-0.69$), consistent with the view that the EQ-i:YV captures several distinct aspects of EI (e.g., adaptability, interpersonal skills, intrapersonal skills). As well, strong correlations were found between the EQ-i:YV and the adult EQ-i ($r = 0.56-0.88$; Bar-On & Parker, 2000).

Trait Emotional Intelligence Questionnaire—Child Form The Trait Emotional Intelligence Questionnaire—Child Form (TEIQue-CF; Mavroveli, Petrides, Shove, & Whitehead, 2008) was developed as tool to understand trait EI in children aged 8–12 years (a separate adolescent form is available for youth aged 13–17 years; Petrides, 2009). The TEIQue-CF is comprised of nine distinct facets (i.e., adaptability, affective disposition, emotion expression, emotion perception, emotion regulation, low impulsivity, peer relations, self-esteem, and self-motivation) measured with a large number of items (75). Children answer using a five-point Likert scale ranging from one (disagree completely) to five (agree completely).

The adaptability facet examines a child’s perception of how he/she is able to adjust or adapt to new people or changing situations, such as “I don’t like trying out new things.” The affective disposition facet specifically focuses on children’s perceptions of how happy and/or sad they generally are, with some awareness of both frequency and intensity of these emotions. An example item includes “I often feel angry.” Emotion expression examines children’s beliefs about their ability to express how they feel, for example, “I always find the words to show how I feel.” Emotion perception incorporates children’s perceptions of how well they are able to label the emotions of others as well as emotions within themselves. For example, statements such as “It is easy for me to understand how I feel” are included within

this facet. Emotion regulation includes the perceptions of how well children can control their emotions, for example, statements such as “I can control my anger” are included within this facet. Low impulsivity examines children’s beliefs surrounding how effectively they can control themselves. Statements such as “I do not like waiting to get what I want” are included. Peer relations include the perceptions of children’s relationships with their friends and classmates. Items include “I listen to other children’s problems.” Self-esteem incorporates children’s own beliefs of their self-worth, including items such as “I feel great about myself.” Finally, self-motivation includes a child’s perceptions of his/her own motivation to do well and includes items such as “If I don’t do well at a test, I try harder the next time” (Mavroveli et al., 2008).

Psychometrically, the authors note that the TEIQue-CF has satisfactory levels of reliability and validity (Mavroveli et al., 2008). Specifically, internal consistency for the full scale was found to be acceptable (Cronbach’s alphas range of 0.72–0.76 at 2 time points). Test-retest reliability over a 3-month period during the norming process was found to be strong (range of 0.79–1.00). The TEIQue-CF also demonstrated good discriminant validity, as there was a limited relation between the measure and measures of verbal intelligence in both boys and girls ($r = 0.24$ and 0.08 , respectively).

EI and Related Constructs

EI has been associated with many factors important for developmental outcomes of children and youth. Of relevance for the current discussion are social skills, empathy, theory of mind (ToM), and self-regulation.

Social skills EI has been directly linked to the social development of children and youth, a key finding that has implications for numerous mental health issues and clinical disorders in this population (Hansen et al., 2009). Indeed, the ability to perceive emotions, process this information, determine an appropriate response, and implement that response is a core feature of both EI and social interactions (Hansen et al., 2009; Saarni, 1999). Moreover, managing and controlling one’s emotions play an important role in both EI and social interactions (Gross & Munoz, 1995; Salovey, Bedell, Detweiler, & Mayer, 1999).

Researchers have indicated a strong overlap between performance on trait EI measures and teacher and peer ratings of social ability in children and youth, suggesting that trait EI contributes significantly to children’s development of social skills (e.g., Mavroveli et al., 2007; Petrides, Sangareau, Furnham, & Frederickson, 2006). Additionally, ability EI is strongly predictive of an individual’s self-reported quality of relationships (Ciarrochi, Chan, & Caputi, 2000) and social competence as judged by others (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006), and is negatively correlated with social deviance (Brackett & Mayer, 2003). Moreover, ability EI has been shown to predict successful social interactions (Lopes et al., 2004; Lopes,

Salovey, Cote, & Beers, 2005) and social network size (Austin & Saklofske, 2005). While EI and social skills are not the same concepts, they are highly compatible concepts, and consequently, using EI models may be useful in the remediation of problems of this sort.

Empathy Perception and processing of emotional information is an integral component of empathy, or one's subjective recognition and understanding of another's emotional state. Indeed, researchers have shown that individuals who score high on measures of trait and ability EI also score high on measures of empathy (Ciarrochi et al., 2000; Mayer & Geher, 1996; Schutte et al., 2001). These results have been shown to have important implications for both interpersonal relationships and vocational aptitude (Austin, Evans, Goldwater, & Potter, 2005; Constantine & Gainor, 2001) in that individuals with higher EI scores demonstrated greater propensity for and performance in vocations that involve a high degree of interpersonal social contact with others.

Theory of mind Theory of mind (ToM) is related to empathy but, more specifically, is defined as the ability to appreciate and understand the beliefs, desires, emotions, and/or intentions of others and to use this information to predict and interpret others' behavior (e.g., Premack & Woodruff, 1978; Saxe, Carey, & Kanwisher, 2004). It has been established as a key component of successful social interactions (Paal & Berezkei, 2007) as individuals who demonstrate impaired ToM typically also present with poor social skills. An empirical link between both ability and trait EI and ToM has been established, as ToM requires perception and awareness of emotions in others (Ferguson & Austin, 2010; Qualter, Barlow, & Stylianou, 2011). However, research findings on populations of individuals who demonstrate impairment in these abilities have indicated that, although related, EI and ToM are distinct capacities. For example, some research with individuals with autism spectrum disorder (ASD) has largely indicated ToM impairment with less pronounced EI challenges (e.g., Blair, 2002). Further, in an examination of the combined impact of ToM and trait EI in youth with ASD, trait EI and ToM were independently related to social stress such that lower trait EI and higher ToM abilities predicted increased social stress (Montgomery, Stoesz, & McCrimmon, 2013).

Emotion regulation Controlling and managing one's emotions and behaviors are central to effective social interactions and are key factors in mental health and EI (Gross & Munoz, 1995; Hansen et al., 2009). Indeed, individuals who are better able to perceive, interpret, and express emotions experience greater mental health (Salovey et al., 1999) than those who struggle with such regulation. "Emotions provide us with an immediate, integrated signal of the status of the self- e.g., approaching a reward, being in danger, being demeaned, feeling happy and so forth" (Matthews et al., 2012, p. 235; Lazarus, 2006). Individuals who can effectively monitor and modify their emotions to support personal goals have an advantage in everyday living and academic activities, while those who cannot (i.e., because of rumination or impulse control issues) have a clear disadvantage in this area.

Emotional (and behavioral) regulation requires an individual to first identify and understand their emotional state and, subsequently, to use that understanding to constructively change emotions and/or behaviors (Matthews et al., 2012). Research on EI and emotion regulation to date has primarily focused on stress and coping strategies (Zeidner & Saklofske, 1996; Peña-Sarrionandia et al., 2015; see also Chap. 4 by Zeidner & Matthews, this volume). In this context, individuals who are able to use adaptive emotion regulation strategies (e.g., breathing, mediating, reflecting, cognitive reappraisal) to adjust their emotional state are able to constructively cope with stress (John & Gross, 2007). Further, studies of atypical groups that have difficulty regulating emotion (e.g., anxiety and depression) suggest that this is a key target for interventions in groups where this is a primary impairment (see Wells & Matthews, 1994; Wells, 2000).

EI and Mental Health

Research on EI initially examined adults and the impact of EI on factors such as interpersonal relationships, work and employment, and physical and mental health (Stough et al., 2009a). More recently, EI applications and research has expanded to include school-aged children. Indeed, the influence of EI on important developmental outcomes has become a primary focus of many clinical and academic pursuits (see Parker, Saklofske, Wood, & Collin, 2009). These efforts have yielded important information about EI in school-aged children and youth and about the relations between EI and several key indicators of positive social-emotional development. In this regard, EI significantly contributes to mental health and is predictive of social-emotional challenges, especially where low EI is reflected in clinical disorders.

EI is strongly related to mental health in adults; poor emotional perception, management, and control are indicative of common symptoms of several mental health disorders (Hansen, Lloyd, & Stough, 2009). Taylor (2001) noted that EI is related to coping, as individuals with well-developed EI are better able to regulate their emotional responses and adapt to life circumstances, which in turn leads to enhanced mental health. Moreover, EI has been shown to be a supportive factor that enhances coping mechanisms when individuals experience distress (Ciarrochi, Dean, & Anderson, 2002). However, the exact nature of this relation is not straightforward, and both direct and indirect influences of EI on mental health have been reported (Zeidner, Matthews, & Roberts, 2009).

EI has been linked with depression symptoms, though few studies have investigated the link between EI and clinical depression. Downey et al. (2008) reported a strong negative correlation between severity of depression symptoms and both emotional management and emotional control in a sample with clinical depression. Kwako, Szanton, Saligan, and Gill (2011) found significantly lower levels of ability EI in a clinically depressed sample compared to healthy controls. Conversely, most studies have shown a relation between EI and symptoms of depression, with studies

showing both trait and ability EI to be negatively correlated to measures of depression (Ciarrochi, Scott, Deane, & Heaven, 2003; Dawda & Hart, 2000; Palmer, Donaldson, & Stough, 2002; Saklofske, Austin, & Minski, 2003; Schutte et al., 1998) and psychological distress (Slaski & Cartwright, 2002).

Lower levels of trait and ability EI have also been found in samples diagnosed with a range of anxiety disorders (Jacobs et al., 2008; Onur, Alkin, Sheridan, & Wise, 2013; Summerfeldt, Kloosterman, Antony, McCabe, & Parker, 2011). Research has also indicated that individuals with Generalized Anxiety Disorder (GAD) struggle with emotional awareness and emotional regulation (Mennin, Heimberg, Turk, & Fresco, 2002), both important aspects of EI. Additional research has shown that individuals with GAD report challenges with perception and description of emotions as well as impairments adapting to new emotional information (Fernandez-Berrocal, Alcaide, Extremera, & Pizarro, 2006; Mennin et al., 2002; Mennin, Heimberg, Turk, & Fresco, 2005). Similarly, individuals with social anxiety, who exhibit prominent challenges with interpersonal functioning, have been reported to demonstrate low EI (Summerfeldt, Kloosterman, Antony, & Parker, 2006). Indeed, these researchers indicated that EI was a significant factor contributing to poor social interactions in these individuals. Moreover, Nolinidin (2006) noted that individuals with social anxiety reported poorer emotion recognition, expression, understanding, management, and control than a control group. Overall, it appears as though EI is a strong factor in individuals' experience of anxiety. Given the impact on depression, anxiety, and well-being in the context of the increasing need to address mental health conditions in schools (and particularly anxiety and depression, given their high incidence), it is beneficial for schools to understand and apply models in schools to enhance overall well-being, in light of preventative and proactive approaches. Specific research on EI interventions in atypical groups is emerging and limited at this time; however, preliminary relevant research is presented in the following section.

EI in Atypical Populations

This section outlines the pertinent research surrounding EI in school-aged children who demonstrate atypical development or learning. Specifically, this section will highlight the literature relating EI to a number of childhood exceptionalities, including ASD, Attention-Deficit/Hyperactivity Disorder (ADHD), Specific Learning Disorders (SLD), Intellectual Giftedness (IG), Intellectual Disability (ID), broad disruptive behavior difficulties (e.g., Conduct Disorder, Oppositional Defiant Disorder), social-emotional difficulties (e.g., anxiety, depression), and those who were maltreated as children. Each section will provide a brief overview of the disorder or exceptionality, with an emphasis on the areas of strength or challenge that relates to EI abilities when appropriate.

Children with ASD

ASD is a neurodevelopmental disorder characterized by impairment in social communication in conjunction with restricted and/or repetitive patterns of behavior as described in the current *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*; American Psychiatric Association [APA], 2013). Specifically, individuals with ASD experience varying impairment in skills required for social reciprocity (i.e., the back and forth of social interaction) and peer relationships, delayed or atypical language development, and repetitive motor movements, fixations on routines, or intense preoccupations with certain topics or objects (Baron-Cohen et al., 1996; Haq & Le Couteur, 2004; Kasari, Sigman, Yirmiya, & Mundy, 1993; Stephanos & Baron, 2011; Tager-Flusberg, 1999; 2001; Turner, 1999). These symptoms must be present in early childhood and limit or impair an individual's everyday functioning (APA, 2013, p. 50). An additional clinical descriptor of "high functioning" (HFASD) is often used to describe individuals with ASD who do not present with comorbid intellectual impairment (i.e., IQ < 70); however, it should be noted that this term often misrepresents the challenges experienced by those without intellectual impairment as they continue to present with substantial impairments in daily living and social communication skills despite their personal cognitive strengths.

ASD challenges impacting EI Given the core impairments demonstrated by individuals with ASD, it is unsurprising that EI has recently become an increasingly popular topic of investigation. Individuals with ASD demonstrate challenges with emotion recognition, perception, awareness, and understanding in both themselves and others, all of which are strongly related to EI. Additionally, emotional and behavioral regulation are often challenging for those with ASD (Samson, Hardan, Podell, Phillips, & Gross, 2015). Indeed, the diagnostic and behavioral indicators of ASD align with EI impairments.

EI in individuals with ASD Although still in its infancy, this line of research has explored ability EI and trait EI profiles of children, youth, and young adults with ASD in an effort to understand their unique abilities and challenges as described by EI models. Early research on EI in clinical populations has focused on young adults with Asperger's syndrome (AS), a form of ASD as described in the previous version of the DSM (*DSM-IV*; APA, 2000). Research findings indicate a difference between ability EI and trait EI (Montgomery et al., 2008) in that individuals with AS (aged 16–21) demonstrated equivalent ability EI to their typically developing peers but reported significantly poorer scores on the interpersonal and overall trait EI domains of the Bar-On EQ-i. Similarly, adults with HFASD have reported significantly poorer trait EI on the TEIQue (Petrides, Hudry, Michalaria, Swami, & Sevdalis, 2011). Additional research has yielded similar results, concluding that ability EI and trait EI together accounted for 57% of the variance in self-reported interpersonal skills of young adults with HFASD (Montgomery et al., 2010). In contrast, a recent

study examining 13–17-year-olds with ASD found a different pattern. In this age group, both trait EI and ability EI were impaired relative to age and gender matched controls (Boily, Kingston, & Montgomery, 2017). In light of the previous studies described, this suggests a developmental improvement in students with ASD. However, it also points to opportunities to improve these skills with early intervention in schools, as students with ASD remain impaired compared to peers. In essence, EI is a strong indicator of social ability in this population and young adults with HFASD possess emotional knowledge but lack insight or awareness as to how that information can be utilized in social situations. Moreover, research has shown that the trait EI impairments demonstrated by individuals with HFASD are unrelated to their cognitive intelligence (Brady et al., 2014), providing evidence that trait EI and cognitive intelligence are indeed unique constructs in this population.

Overall, research has shown that children with HFASD appear to present with intact ability EI yet demonstrate impairments in their use of emotional information when in social situations (trait EI) during adolescence and young adulthood. Alternatively, teens with ASD demonstrate impairments in both forms of EI, while adults demonstrate intact ability EI but impaired trait EI. This set of findings suggests a need to further explore specific developmental periods to identify optimal intervention timing across the life-span.

Children with ADHD

ADHD is a neurodevelopmental disorder characterized by inattention and/or hyperactivity-impulsivity that is inconsistent with age or developmental level (APA, 2013). Prevalence rates of ADHD range from 5% to 7% in school-aged children (Willcutt, 2012) with recent estimates indicating rates of up to 16% (Rowland et al., 2013). ADHD affects approximately twice as many males as females in the general population (APA, 2013) with a larger ratio of affected males to females in clinic-referred samples (approximately 6:1; Froehlich et al., 2007). Individuals with ADHD are at risk for difficulties across a number of domains, including academic underachievement, high rates of noncompliance and aggression, and difficulties with peer and social relationships (DuPaul & Stoner, 2014).

As previously outlined, there is a strong literature basis linking EI and social skills and highlighting the correlation between these skills (e.g., Poulou, 2014). There is a clear risk for poorly developed EI skills in those individuals who also show limited social abilities. Although not all children with ADHD demonstrate prominent social deficits, it is likely that a child identified with ADHD will have problems within the social domain. Specifically, these children are more likely to be rejected or isolated by peers, experience difficulty forming and maintaining close friendships and relationships, or have trouble understanding social and environmental cues (see McQuade & Hoza, 2008). These social challenges often have a significant impact on the abilities of children with ADHD to interact appropriately with those around them, both in the academic and social environments.

ADHD challenges impacting EI Why might children with ADHD have challenges in EI? Core deficits in ADHD have been linked to the competencies central to EI development. For example, individuals with ADHD frequently struggle with recognizing and perceiving emotions in others, have difficulties with affect regulation, and generally experience social challenges (e.g., Friedman et al., 2003; Martins, Ramalho, & Morin, 2010). These social competencies have been identified as key aspects of competence within the EI realm. As such, it is unsurprising that individuals with ADHD may demonstrate challenges in EI. However, despite this logical extrapolation given the understanding of the deficits associated with ADHD, there is limited published research that specifically explores the relation between EI and ADHD.

EI in individuals with ADHD The examination of EI in individuals with ADHD is a relatively new area of exploration and there are no published studies to date that examine EI levels of young children with ADHD. Indeed, only handful studies have been published, and these have utilized an adolescent and/or adult population; however, these studies provide valuable initial insight into the trait EI of those with ADHD and set the stage for further exploration of EI in those with ADHD across the life-span.

The first published study examined the relation between trait EI and symptoms of ADHD in university students (Fleming & Snell, 2008). This study found that some behavioral indicators of ADHD were correlated with aspects of trait EI. For example, students who reported greater levels of inattention were also more likely to report less clarity regarding the experience of those feelings. As well, those who reported higher levels of hyperactivity-impulsivity also reported lower levels of emotion regulation. This same pattern of associations was replicated by Parker, Keefer, and Wood (2011) using different measures of trait EI and ADHD symptoms and controlling for the effects of basic personality. Both studies concluded that ADHD symptoms and trait EI were inversely related, where those with greater indication of ADHD symptomology indicated lower levels of trait EI across a number of domains.

A more recent study incorporated adolescents and young adults with ADHD and provides initial insight into the trait EI of this population. Specifically, Kristensen et al. (2014) examined the relation between symptoms of ADHD and trait EI in a sample of adolescents and young adults. Overall, path analyses indicated moderate to strong negative associations between trait EI and ADHD symptomology across both the adolescent and young adult groups. In addition, low-stress management was the strongest predictor of hyperactivity-impulsivity and inattentive symptoms for both groups. However, the researchers stress that this work should be extended to better understand the directionality of the relation between trait EI and ADHD, as it is not possible to determine causality from existing correlational studies.

Together, it is clear that the impact of ADHD on EI abilities is an emerging area of research but these abilities may have significant impact in the peer relationships of school-aged children with ADHD. Specifically, it appears as though those with ADHD may have lower levels of EI than those without, indicating that children with

ADHD may not be able to appropriately understand or “read” the body language of their peers and, therefore, may not understand the associated nonverbal emotional implications. Consequently, these underdeveloped EI skills may make it even more challenging for these children to establish and maintain age-appropriate friendships at school.

Children with SLD

SLD encompass a broad variety of challenges in an academic environment. More specifically, an SLD diagnosis includes challenges in a number of academic areas, including mathematics (e.g., computation, problem-solving), reading (e.g., fluency, comprehension, phonetics), and/or writing (e.g., production, organization). This diagnosis requires that an individual has experienced persistent difficulties in one or more of these academic areas for an extended period of time and that basic attempts at remediation in a regular classroom do not improve performance (APA, 2013). In addition, with the introduction of the *DSM-5* (APA, 2013), the description of “learning disabilities” has become broader and there is now less focus on determining whether there is a specific “ability-achievement” discrepancy. Instead, children may be identified as having a specific learning disability regardless of intelligence level so long as their academic achievement in a specific area is below what would be expected given their age and/or grade (APA, 2013).

SLD challenges impacting EI In addition to academic challenges, children with SLD also demonstrate challenges related to social-emotional well-being. Indeed, the winter 2004 issue of *Learning Disability Quarterly* was dedicated to highlighting and understanding the social-emotional side of those with academic challenges. Elksnin and Elksnin (2004) highlighted that previous researchers in the field have identified that children with SLD often struggle with poor language and communication (e.g., Vallance, Cummings, & Humphries, 1998), identifying and/or understanding others’ emotions (e.g., Stone & La Greca, 1984), and social-emotional problem-solving (e.g., Hartas & Donahue, 1997), all of which may directly impede the social-emotional learning of children with SLD.

Elias (2004) discusses three primary areas of social-emotional learning that appear to have the greatest impact on the abilities of children with SLD: recognizing emotions in oneself and in others, controlling and monitoring positive and negative emotions, and identifying areas of strengths and difficulty. Specifically, children with SLD often demonstrate challenges in one or more of these areas and frequently require some form of remediation to develop age-appropriate skills in these areas. In particular, Elksnin and Elksnin (2004) noted that while the social and/or emotional difficulties associated with SLD are well-recognized, they are often not addressed as the traditional focus of school-based intervention is the remediation of academic concerns.

Although Elias (2004) primarily discusses these areas of social-emotional learning in relation to SEL intervention, it is clear that many of these concepts have

direct applicability to the EI abilities of children with SLD. As such, given the overlap in the terms “social-emotional learning” and “emotional intelligence,” it naturally follows that individuals with SLD may also demonstrate impairment in one or more aspects of EI.

EI in individuals with SLD While children with SLD have noted challenges in social and/or emotional abilities (Elksnin & Elksnin, 2004), there has been limited focused research specifically examining EI of these children. Petrides, Frederickson, and Furnham (2004) examined the role that trait EI played in academic performance in school-aged children. They argued that trait EI may be a particularly relevant challenge for children who fall in vulnerable groups (e.g., those with learning or intellectual challenges) as trait EI may work as a moderator between cognitive ability and academic achievement. Results of this study indicated that trait EI did have a moderating effect on the relation between cognitive intelligence and academic performance in English and on overall exam performance but had no impact on math or science performance. They noted that those with greater trait EI may be better able to manage the emotional stress often associated with exam situations, resulting in stronger performance. As well, subjects that included more affect-related material (e.g., English) were impacted more substantially by trait EI than those subjects without (e.g., science, math). Additionally, Mavroveli and Sánchez-Ruiz (2011) also found that children who were broadly identified as having special education needs (e.g., learning or cognitive difficulties) demonstrated poorer emotion-related self-perceptions than those without these challenges.

In the young adult literature, Hatzes (1996) explored the academic and employment outcomes of college students with SLD who either graduated from college or who were academically dismissed (in light of poor performance). It was found that EI was a critical contributing variable to more positive outcomes in both of these domains and that specific key factors included managing ones’ emotions, persistence, increased empathy, and more positive reframing of negative events. However, factors such as gender and a non-SLD group were not considered in this study. Subsequently, Reiff, Hatzes, Bramel, and Gibbon (2001) followed up this work and found that, overall, college students with and without SLD did differ significantly across a number of trait EI domains. Significant differences were noted in the area of stress management, as those with SLD reported greater issues related to stress. However, as both Hatzes (1996) and Reiff et al. (2001) note, although there is a relation between academic achievement and trait EI, the true direction or causality of this relation is not yet known.

Children with Intellectual Giftedness

There is much research on what constitutes “giftedness” and many perspectives on what domains individuals may be considered “gifted”. In particular, Gardner’s notion of multiple intelligences (e.g., Gardner & Hatch, 1989) implicates a number

of specific areas in which one may demonstrate particular aptitude, including musical, logical-mathematical, linguistic, spatial, bodily kinesthetic, interpersonal, and intrapersonal. However, for the purpose of this section, discussion will revolve around overall intellectual giftedness (IG). Although an identification of “gifted” is not a mental disorder, it is a generally recognized exceptionality where individuals with IG typically have cognitive intelligence quotient (IQ) scores at or above a standard score of 130, as measured by a standardized intelligence test administered by a trained professional.

Children with IG demonstrate a wide variety of unique characteristics, often with individual differences between children. For example, Renzulli (1978) noted a number of cognitive and non-cognitive attributes displayed by these children, including having a strong vocabulary, showing quick mastery of skills, easily recalling learned facts, quickly becoming bored with routines, enjoying independence, demonstrating originality in thought, and being alert and observant. Although Renzulli (1978) is a somewhat dated paper, many of these characteristics have held true and still accurately describe children with high cognitive abilities. However, these children often face other challenges that may impact their development.

Challenges impacting EI in children with IG Children with IG are often quick thinkers and enjoy challenges. However, they are also potentially at risk for underdeveloped social and emotional skills, especially as asynchronous development is often seen in these children (e.g., Fiedler, 1993). Specifically, although their cognitive abilities are ahead of their chronological age, their abilities in other areas (e.g., social functioning) sometimes lag behind. As such, children with IG often encounter social and/or emotional challenges, such as issues surrounding self-esteem, perfectionism, and peer relationships (Schwean, Saklofske, Widdifield-Konkin, Parker, & Kloosterman, 2006). Given the strong link between social-emotional skills and EI, underdeveloped social skills may have a significant impact on EI competence.

EI in individuals with IG EI in children with IG has received some research attention in the past few years, although there is clearly a need to continue to expand this work. For example, Schwean et al. (2006) concluded that trait EI of children with IG was not dissimilar to those with average cognitive abilities (either within segregated or regular classrooms), as noted by both self- and parent-reports of trait EI. However, Lee and Olszewski-Kubilius (2006) found somewhat different results. They noted that adolescents with IG demonstrated higher scores on adaptability and lower scores on stress management and impulse control, as measured by the EQ-i (Bar-On, 1997). Lee and Olszewski-Kubilius (2006) further examined the role of gender in trait EI and noted that although males with IG were comparable to their non-IG peers, females with IG were behind the normative group. Finally, Chan (2003, 2006), in his exploration into adolescents from Hong Kong with IG, proposed a model in which coping strategies played an influential role in the EI competencies of these individuals. Social

skills emerged as the most important component of EI, and the relation between EI and psychological distress was mediated by coping styles in this population.

It is also important to highlight work by Zeidner, Shani-Zinovich, Matthews, and Roberts (2005) who assert that often it is the type of EI assessment tool used that is influential in determining the EI profile of gifted individuals. In their study, they examined gifted and non-gifted students on measures of ability EI (MSCEIT) and trait EI (Schutte Self-Report Inventory [SSRI]). It was found that gifted students had higher scores on the MSCEIT but lower scores on the SSRI compared to their non-gifted counterparts. The authors posit that this distinction may be due to the greater link between performance-based ability EI measures such as the MSCEIT and some aspects of cognitive abilities—namely, verbal abilities—and there was a weaker relation between the trait EI SSRI scores and overall cognitive abilities. Going beyond group differences in EI profiles, Parker, Saklofske, and Keefer (2017) followed a sample of exceptionally high-achieving secondary students from the start of their university education, when they completed the EQ-i, over 6 years. They found that students with higher trait EI were significantly more likely to complete their university studies and graduate with a degree compared to their equally academically talented but less emotionally intelligent peers.

Together, results from these studies are consistent with the idea that IG is typically an asset to social and emotional functioning, rather than a hindrance (e.g., Lubinski & Benbow, 2000). However, it may be necessary to guide children with IG in their development of skills related to EI, as their asynchronous cognitive and social-emotional development may pose additional assessment and intervention challenges.

Children with Intellectual Disability

Exploration of EI in children with ID is extremely limited. It has been noted that it is critical to distinguish between cognitive and emotional intelligence and that the constructs are not one and the same (Barchard, 2003). As such, it is often challenging to capture accurate EI competencies in children with significant cognitive impairment for many reasons, including measurement limitations related to the verbal skills required to complete self or performance based measures. Research that has included children with ID (e.g., Mavroveli & Sánchez-Ruiz, 2011; Petrides et al., 2004) indicates that children with less significant cognitive impairment appear to have greater EI competencies and that the degree of cognitive challenge is an influential factor in a child's overall EI level. This finding is not surprising, as children with ID have difficulties across a number of domains, often including those related to social and emotional difficulties. As such, those who demonstrate greater aptitude in some of these areas may also demonstrate increased levels of EI. However, there is still a lack of research in this area, and a clearer understanding of EI in children with ID is necessary.

Children Who Have Been Maltreated

Child maltreatment is a clear threat to adaptive development. Researchers vary on how they define and categorize types of maltreatment but most agree that the impact of neglect and physical, psychological, or sexual abuse in early development is problematic for optimal cognitive and emotional development (see Maughan & Cicchetti, 2002). While actual prevalence rates are difficult to determine in light of how research defines kinds of maltreatment and also because of the probability that a large number of cases are not reported, a recent study indicates that 9.2/1000 children in the US population experienced maltreatment (US Department of Health & Human Services, 2013). While this may be an underestimate, it indicates that many children in our schools have been exposed to maltreatment and may have emotional or psychological problems as a result. Alternatively, many researchers have examined adult populations to understand the extent and long-term impact of experiencing maltreatment. In Canada, a recent study using this approach to document an overall maltreatment prevalence rate (reported retrospectively by adults 18 and older) indicated that 32% of this population were maltreated as children and that a large number were experiencing psychological distress as adults (Affifi et al., 2014), pointing to the lifelong impacts of child maltreatment.

Challenges impacting EI in children who have been maltreated Children who have experienced physical, sexual, or psychological abuse or neglect are at risk for a variety of poor outcomes related to emotional competencies. Maltreatment type and/or higher severity (and frequency) of maltreatment have been associated with impaired performance on tasks related to social understanding, including emotion skills, emotional understanding, and knowledge about emotions (Luke & Banerjee, 2012). These outcomes are further complicated by the likelihood of multiple forms of abuse occurring within dysfunctional family settings. For example, children who have experienced abuse or neglect are commonly exposed to multiple types of abuse (upward of 78% to 90%; McGee et al., 1995; Spinazzola et al., 2005). Consequently, attention to forming positive supportive relationships is likely to be a key factor in the success of any SEL intervention in this group and teachers should attend to this issue before beginning any systematic intervention program. Further, there is a large body of research that indicates child maltreatment impacts not only early relationships (attachment) with caregivers but also contributes to the quality of relationships formed throughout development (Briere, Godbout, & Runtz, 2012; Briere & Jordan, 2009; Fraley & Shaver, 2000; Muller et al., 2012). As such, school staff need to be aware that it is rare for a child to experience only one form of abuse and the impacts might be compounded with additional experiences. Further, the role of school staff in facilitating solid, trustworthy, and responsive relationships in the school years can be seen as an important aspect of working with students who have had these difficult experiences, given the likelihood that the lack of appropriate models in the home setting may be a barrier to socioemotional learning in school settings.

EI in children who have been maltreated EI-based investigations are rare in this population; however, some researchers have addressed compatible and relevant concepts, such as the development of psychological disorders and emotional regulation

skills. Specific effects of maltreatment on development depend on the age of the child and individual, home, school, and community protective factors (Maughan & Cicchetti, 2002). A history of childhood maltreatment is associated with deficits in numerous areas across the life cycle, including disturbances in attachment relations, deficits in frustration tolerance, problems with self-esteem and peer relations, and reduced educational and vocational attainment in adulthood (Briere & Jordan, 2009; Weich, Patterson, Shaw, & Stewart-Brown, 2009). Maladaptive family functioning is one of the strongest predictors of psychological maladjustment and is usually implicated in most cases of maltreatment (Green et al., 2010; McLaughlin et al., 2010; Perepletchikova & Kaufman, 2010); as such, it is helpful to understand how family dysfunction may contribute to problems with social-emotional development in this group. For example, negative parenting practices—specifically harsh discipline—are related to lower emotional understanding and regulation (Perepletchikova & Kaufman, 2010). Further, maltreated children were significantly more likely to display difficulties in emotional regulation when compared to “typical” controls (80% of maltreated vs. 37% of controls; see Maughan & Cicchetti, 2002), indicating that this is a clear area of concern for emotional development.

Further, in our lab work study examining social-cognitive capacities of university students who were maltreated as children (Schwartz, 2016), we found that social-emotional capacities are impacted by frequency and severity of abuse and that different kinds of abuse appear to impact individuals differently. More specifically, students reporting childhood experiences of neglect had lower ToM and ability EI, while psychological abuse alone predicted lower trait EI. Alternatively, individuals who reported sexual abuse in childhood demonstrated a significant impairment in ToM and lower ability EI, with sexual abuse predictive of these poor outcomes. Surprisingly, the impact on individuals who had been physically abused was not significant on the measures included in this particular study (MSCEIT, EQ-I(S), and Reading the Mind in the Eyes—a measure of ToM). However, these preliminary findings support the well-accepted notion that abuse in childhood impacts social-emotional development and as such is an important target to improve the lives of those who have had these experiences. EI and SEL programming may be beneficial to these populations; however, current intervention research does not directly address this group.

Children with Behavioral Challenges

Children with behavioral difficulties, commonly known as disruptive behavior disorders, are characterized by challenges in emotional or behavioral adjustment, consequently resulting in difficulties with personal or interpersonal self-control (Gresham, 2005). Mental health treatment referrals for these disorders indicate that prevalence rates in youth may be as high as 40% (Rushton, Bruckman, & Kelleher, 2002), significantly impacting their ability to successfully navigate their environment. These individuals often present the most challenge to parents and teachers over those with other special education identifications (e.g., learning or social

difficulties). Consequently, parents and teachers often struggle to find ways to support these children effectively and appropriately so that they are able to make the appropriate gains in the classroom and are able to interact successfully with their peers.

Behavioral challenges impacting EI Individuals with behavioral difficulties have numerous challenges that may impact their EI abilities. For example, when deviant behavior is present throughout childhood and into adolescence, there are a number of potentially damaging consequences. Moreover, frequent and/or severe conflict with others (including parents, teachers, and peers) is likely to have a significant impact on an individual's social, emotional, academic, and functional adjustment (Moffitt, 2006). In addition, these individuals are at greater risk for further adjustment difficulties spanning into adulthood, including issues such as substance abuse, antisocial behavior, and conflicts with the law (Frick & Nigg, 2012). As such, these behaviors, either in childhood, adolescence, or adulthood, may significantly impact the appropriate development of EI skills, further exacerbating potential social and emotional challenges.

EI in individuals with behavioral challenges There has been limited research on EI of individuals with behavioral challenges. More frequently, behavioral problems have been included in a broader examination of ability EI and trait EI in children, youth, or young adults. However, in one study that specifically examined correlates of ability EI in college students, Brackett, Mayer, and Warner (2004) reported that there was a significant association between ability EI (as measured by the MSCEIT) and maladjustment and/or negative behaviors (e.g., illegal drug and/or alcohol use, poor relationships with peers, deviant behavior) for males but that the same association did not hold for females. Males who had lower levels of ability EI were involved in more potentially harmful behaviors than those with greater EI abilities.

In youth, studies have indicated that children and adolescents with greater trait EI and more competent social skills were less likely to present with behavioral difficulties (e.g., Davis & Humphrey, 2012; Poulou, 2014). Petrides et al. (2004) also found that trait EI was negatively associated with school truancy and unexplained absences in (British) high school students, where those with lower trait EI scores were more likely to have experienced expulsion from school. However, they note some issues with sample size and highlight that other possible extraneous variables (e.g., social abilities, other distress) may have impacted the findings of this study, pointing to the need for further research to understand this group more clearly.

Children with Social-Emotional Difficulties

Children with social or emotional difficulties present with a variety of behaviors that impact their well-being and their ability to successfully navigate their environment. For example, as identified by the *DSM-5* (APA, 2013), diagnosable social and emotional disorders found in childhood or adolescence include anxiety disorders

(e.g., GAD, separation anxiety, phobias), depressive disorders, social communication, stress disorders, or somatic disorders. As such, children may experience a variety of symptoms related to anxiety, depression, withdrawal, panic, excessive worry, social incompetence, physical symptoms (e.g., headaches or stomachaches), or social stress (APA, 2013).

The number of children experiencing challenges within the social and/or emotional domain is continually on the rise. Overall, prevalence rates of mental health disorders in children and youth range from 10% to 15% (Climie, 2015; Greenberg et al., 2003). The potentially negative long-term outcomes for these individuals are well-researched: those with significant social or emotional difficulties in childhood are at greater risk for more serious behavioral (e.g., high-risk behaviors such as drug or alcohol use), social, and emotional disorders through adolescence and into the early adulthood (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Unfortunately, the number of these children who actually receive mental health treatment is low, often less than 50% (Greenberg et al., 2003).

Challenges impacting EI in children with social-emotional difficulties Given the prevalence of literature linking social and emotional competence to EI abilities (e.g., Brackett et al., 2006; Mavroveli, et al., 2007), individuals with social or emotional difficulties are clearly at subsequent risk for underdeveloped EI skills. Those with social or emotional challenges may not afford themselves the opportunity to interact regularly with their peers (e.g., they do not seek out social situations) so as to gain the necessary experience and skills in this area. Consequently, their EI abilities would continue to lag behind, resulting in a downward spiral of emotional and/or social progress. As such, it may be important to provide targeted support for these individuals to prevent and/or remediate these challenges as soon as possible so as to ensure that these individuals are not impacted in the long term.

EI in individuals with social or emotional difficulties Studies have examined the relation between trait EI and peer acceptance in school-aged typically developing children (e.g., Mavroveli, Petrides, Sangareau, & Furnham, 2009; Petrides et al., 2006) and adolescents (e.g., Mavroveli, et al., 2007). These studies generally found that trait EI scores were strongly predictive of emotional and social criteria, including peer acceptance and social competency. Specifically, children with higher trait EI scores have been found to have better peer relations and are rated as being more pro-social by peers (Ciarrochi, Chan, & Baigar, 2001; Mavroveli et al., 2007, 2009). These findings parallel those found in adult studies of EI and social relationships (Goleman, 1995).

EI Programming for Schools

Few programs directly targeting EI have been developed, and preliminary information is only recently emerging on effectiveness and efficacy. Some programs target individuals, while others target large groups, consistent with Tier 1 (preventative)

approaches to school-based interventions. Alternatively, there are numerous SEL programs that incorporate many of the concepts captured by EI, which offers promise for improving outcomes (Durlak, Domitrovich, Weissberg, & Gullotta, 2015). Given that school is only one of the settings in which children spend their time, combined with staff reported challenges coping with the increasing social and emotional demands of school settings, and given that pro-social environments are fostered by the adults in schools, it is worthwhile to consider whole school interventions that target not only students but any staff member who interacts with students, as well as whole schools and/or classroom-based approaches, and community-based extensions (see Chap. 12 by Elias, Nayman, & Duffell, this volume; Chap. 7 by Hoffmann, Ivcevic, & Brackett, this volume). Indeed, some programs aim to facilitate consistent approaches across home and school, and in these cases, even parents are targeted in programming.

Challenges with EI Programming in Schools

EI programming is usually conducted within the broader framework of SEL approaches. Numerous SEL related programs are available that may or may not be consistent with an EI-based approach and are often difficult to evaluate given the diversity of programming available (for a full review, see Matthews, Zeidner, & Roberts, 2012; see also Chap. 8 by Humphrey, this volume). As a general framework, SEL interventions may target key EI skills. However, this is difficult to ascertain in many programs when the subcomponents are not clearly articulated. To assist in this process, Matthews et al. (2012) provide a general description of the core elements of most SEL programs that implicate EI components, though not always directly or clearly. These authors note that most complete SEL programs include components reflecting: self-awareness (identifying and recognizing emotions, accurate self-perception, identification of strengths and values), social awareness (perspective taking, empathy, respect for others/diversity), responsible decision-making (problem identification, analysis, problem-solving, evaluation, and reflection), self-management (impulse control and stress management, self-motivation and discipline, goal setting, and organizational skills), and relationship management (communication, relationship building, collaboration/cooperation, negotiation and conflict management, help seeking, and helping others).

Additionally, Matthews et al. (2012) outline general guidelines for effective SEL programs, which are relevant to consideration of EI programming. These authors suggest that curriculum materials need to address the whole person (not just academic components or single skills); skills should be taught in the content of school activities and are best integrated within academic curricula; programs need to be developmentally appropriate for the particular age of the students being targeted; teachers and administrators need to be on board and appropriately trained; and systematic program evaluation should be planned for and carried out. These are considered *best practices* for implementation and will enhance programming in schools if followed (for further analyses of SEL programs, see Chap. 8 by Humphrey, this volume).

Finally, in terms of EI content in SEL programming, Matthews et al. (2012) note that specific targets vary immensely between programs, may only be slightly related to EI, or may only target a few skills. This limits our ability to say these programs are indeed EI based and certainly limits the ability to generalize results to EI programming. One notable exception is the RULER approach, which is designed explicitly around the mainstream ability EI model (see Chap. 7 by Hoffmann et al., this volume). Further, programs often target a broad range of skills desired in school settings and may be designed for an altogether different purpose (e.g., preventing alcohol use). Consequently, these programs may be fragmented in terms of specific EI content and make evaluation of effectiveness difficult. Clearly, more research is needed on the match between existing SEL programs and EI frameworks, in addition to increased evaluation of EI-specific programs, as this approach has only recently emerged and few programs can claim a sound research base at this point in time. However, there are some promising approaches that, when used with the guidelines above, have potential to improve the social-emotional competencies of school staff and students and, in some cases, the wider community.

School-Wide EI Interventions

School staff (teachers, principals, educational assistants, and other support staff) have a large impact on student well-being, and effective teachers promote positive development in both academic and social-emotional domains (Castillo, Fernández-Berrocá, & Brackett, 2013). Further, effective teachers and administrators (principals) have been found to have high levels of EI, while those who struggle with ongoing demands report low levels of EI (Stone, Parker, & Wood, 2005). Many school staff members report high levels of stress and low levels of positive emotions in schools (Johnson et al., 2015). Further, teacher stress is one of the top reasons reported for school staff leaving the profession (Ingersoll, 2001), and as such, it is essential to consider the whole school context before implementing interventions that aim to impact student well-being.

Whole school approaches fit within the current *response to intervention* (RTI) framework as preventative (or Tier 1) approaches. At this level of intervention, it is important to consider how staff are functioning in the social-emotional domain, as they have a powerful effect on student learning and well-being. For example, if a teacher is experiencing high levels of stress or perhaps demonstrating characteristics of depression or anxiety, their social-emotional skills may be taxed. This may result in a lack of patience with student needs, hyper-focus on personal difficulties, poor mood, or lack of enjoyment in teaching activities (Ingersoll, 2001). Teachers experiencing these challenges are unlikely to be able to support emotional development in students effectively and may model some behaviors that are incongruent with fostering a pro-social environment. Likewise, other adults in the school interact with and have an impact on student well-being. Consequently, it is important to target staff wellness before or in concert with addressing student

social-emotional needs. Therefore, we include EI training programs for teachers in our review to elucidate potential approaches to improve staff well-being (for an example of preservice EI training for teachers, see Chap. 14 by Vesely-Maillefer & Saklofske, this volume).

Emotionally Intelligent Teacher Workshop The Emotionally Intelligent Teacher (EIT) program involves a full-day workshop that offers teachers the opportunity to learn skills and strategies relating to EI, its importance, and its application within relationships across personal and professional contexts (Brackett & Katulak, 2007). The primary objectives of EIT are (1) to aid teachers in developing a safe and supportive school environment and (2) to enhance the relationships that are formed between the teacher, their students, and members of the community. This workshop provides resources for coping with stress; information about key EI abilities based on Mayer and Salovey's (1997) four-branch model (i.e., emotion recognition, utilization, understanding, and regulation) and their influence on academic, social, and emotional outcomes in the educational context; and strategies for supporting EI development in the classroom. For example, teachers are taught to use the EI Blueprint, an approach consisting of four questions that aid teachers in actively working through emotionally challenging situations, where each question prompts consideration of one of the four key EI abilities. These questions encourage the teacher to reflect upon:

- What was each person feeling?
- What was each person thinking (as a result of these feelings)?
- What may have caused each person to feel the way they did?
- What did or could each person do to manage these feelings?

Teachers are then directed to create a plan for similar or relevant future situations to address the impact of feeling and thinking on interactions explicitly and guide reflection to facilitate optimal approaches going forward (for more detail on this program, see Brackett & Katulak, 2007).

RULER While research on EI interventions is emerging, some programs are further along in this process. RULER is an example of an evidence-based universal SEL program developed to strategically target the four branches of Mayer and Salovey's (1997) ability EI model for students and all school staff (Castillo et al., 2013; see also Chap. 7 by Hoffmann et al., this volume). It is highly compatible with the EIT workshop as it was created by the same developers and mirrors some of the main elements. It contains a teacher/administrator training component and classroom curriculum (at various age levels) for student development and is available for use with students in kindergarten through grade eight. Within the training component, teachers learn about the RULER program, the key emotional skills, the four "Anchors" used to create a supportive environment, and the Feeling Words Curriculum, designed to teach students about expressing emotions (Hagelskamp, Brackett, Rivers, & Salovey, 2013).

The RULER approach acknowledges the crucial role school climate plays in socioemotional health and is a sound proposal for building EI capacity in schools. RULER is based on the ability model of EI and targets the following skills:

- **Recognition of emotion**—in oneself and others
- **Understanding emotion**—particularly, the causes and consequences of emotions
- **Labeling emotion**—with accurate and diverse vocabulary
- **Expression of emotion**—in socially appropriate ways
- **Regulating emotion**—in socially appropriate ways

Within this program, emotional literacy is achieved only after (1) mastering these five RULER skills and (2) understanding their role in social, emotional, and academic outcomes. These competencies best develop in supportive environments that encourage emotional expression and repeated practice of RULER skills. The RULER approach provides four practical tools, referred to as program *anchors*, to target the areas listed above: Charter, Mood Meter, Meta-Moment, and Blueprint.

The Charter The Charter is a statement that captures expectations for the school or classroom environment, informed by staff, teacher, and student perceptions. It includes perspectives on how individuals want to feel in the school or classroom setting (safe, respected, valued, etc.), concrete statements of behaviors to facilitate the feelings identified, and guidelines for preventing and responding to challenging behaviors in the context of the feelings desired. This direct and explicit activity aims to clarify expectations for students and staff by clearly operationalizing the guiding principles with examples of appropriate behavior.

The Mood Meter Communicating about one’s own emotions can be difficult for adults, as well as students. The program invites school members to reflect on their emotions using a four-quadrant grid defined by two dimensions: low-high valence (or pleasantness) and low-high arousal (or energy level). Individuals are oriented to pay attention to facial expressions, body language, vocal tones, physiological experiences, and behaviors as context cues and to plot their current mood on the Mood Meter. The tool provides a variety of emotional vocabulary guides to increase recognition of nuanced emotions and to help identify what emotions they would like to feel. Further, this tool can be used to uncover potential strategies and teaching methods that facilitate movement from one mood state to another. There is an app available for this component at www.moodmeterapp.com.

The Meta-Moment The Meta-Moment is a visual tool that can be used to reflect on real-life occurrences with the goal of building skills to understand social-emotional situations across similar contexts. It uses incidental teaching (or teachable moments) to apply appropriate emotional reasoning steps. For example, when an individual encounters a conflict, they will work through a series of cognitive steps to describe what happened and how it made them feel, visualize the desired outcome, and identify potential response strategies for this and other similar situations.

The Blueprint The Blueprint is a problem-solving framework to use when reflecting on emotional experiences. This tool (which is also used in the previously mentioned EIT workshop) directs the individual to reflect on both parties (self and the other person) in the interaction, explicitly addressing each RULER skill by considering how each party likely felt, what caused their feelings, how they expressed and regulated their feelings, and what they could have done to handle the situation better. The final step in the Blueprint requires the individuals to reflect on their responses and plan for future challenges.

The RULER approach has been demonstrated to improve teacher engagement, increase positive interactions with students, lower levels of teacher burnout (Castillo et al., 2013), improve classroom instruction (Hagelskamp et al., 2013), and enhance classroom climate (Rivers, Brackett, Reyes, Elbertson, & Salovey, 2013). Further, in terms of student outcomes, researchers have documented improved academic outcomes (Brackett et al., 2013), decreased suspensions, and increased conflict management skills, EI, and social competence (Reyes, Brackett, et al. 2012). A strength of the RULER program is its goal to “train everyone with a face” who enters the school (M. A. Brackett, personal communication, February 8, 2016). This approach helps to ensure strong supports and unified strategies within the school. Additionally, the materials for this program are highly engaging, easy to use, and relatively low cost. Consequently, this program is highly practical for school settings and is among the few EI-specific approaches accumulating a strong evidence base for its use.

Classroom EI Interventions

Emotional Literacy in the Middle School (ELMS) Emotional Literacy in the Middle School (ELMS) is a six-step program for incorporating SEL programming in the middle school curriculum (for more detail, see Brackett & Katulak, 2007). It is intended to be implemented after the previously outlined EIT workshop. In this approach, emotional literacy and activities related to understanding emotions are integrated into existing curriculum subjects, can be taught efficiently in small (15 min) sessions, and build developmentally on the previous lesson, as described below. It is important to note that there is limited research on this approach; however, the authors have used this with teachers and schools and found it well received and impactful, according to teacher perceptions.

Step 1: Introduction of feeling words. Teachers provide and help define vocabulary related to feelings and try to have students connect this to previous learning or experiences. This helps the students to see the personal relevance of this content in their everyday lives and enhances the chances that students will understand concepts both intellectually and experientially.

Step 2. Designs and personified explanations. Students observe images or designs and then describe them using feeling words. This step helps to incorporate visual elements and helps students to personalize their responses and thus celebrates diversity of interpretations.

Step 3. Academic and real-world associations. Students are encouraged to relate feeling words presented previously to their everyday lives, with specific references to social or academic contexts. Students are encouraged to consider how different people, or different situations might cause people to “experience, express and manage” (p. 15) emotions in diverse and unique ways.

Step 4. Personal family association. Students are encouraged to bring the discussion of emotional vocabulary into the home setting. Students may ask parents how they have experienced a particular vocabulary word in their lives, which not only encourages communication but enhances generalization to the additional contexts.

Step 5. Classroom discussions. Class discussions are used to facilitate conversations that tie in school and life contexts. Students are encouraged to respond to peer sharing and thus experience and appreciate various viewpoints.

Step 6. Creative writing assignments. Students create a written assignment with the “feeling word of the week.” This could take the form of short stories or other forms of creative writing that may focus on how emotions change and progress or how perspectives on emotions change, for example. This enables students to consolidate and integrate their emerging emotional knowledge. Additionally, this writing component can be easily integrated to language arts or health curricula.

Research on the ELMS programming is difficult to locate, and as such, this should be considered as a promising option at this time.

Individual EI Interventions

Although most EI programs have been developed for proactive and preventative use in schools or classrooms, it is possible to use these individually with students as specific concerns arise. However, in these cases, we strongly recommend that pre-assessment is needed to determine specific and individualized intervention targets. Many of the EI assessment tools outlined previously in this chapter can be useful for this initial screening. Based on data collected from screening, school staff can then teach to deficient areas while using intact or well-developed areas as a jumping off point to augment deficits and reinforce strengths. For example, if an individual has well-developed interpersonal skills with a relative weakness in intrapersonal skills, schools can use competence in interpersonal interactions to help the student reflect on their own skills and competencies—and particularly self-insight. One particularly relevant application of this is when students (or staff) are compassionate toward others’ mistakes and foibles but hold high and unrealistic standards for their own behavior. In this context, mindfulness-based self-compassion strategies are used to facilitate reflection on:

- What would you do if a friend had this situation?
- What would you say or do to support them?
- How can you do this for yourself?

The premise here is for the student or staff member to understand that compassion for oneself is just as important as compassion for others—and the same strategies can and should be used with oneself in a patient and nonjudgmental way. This particular activity reflects how mindfulness-based approaches can support EI development and, in this case, particularly intrapersonal knowledge and skill.

In addition, simply providing direct instruction on what EI is, what the subcomponents are, and why they are important has been found to be helpful in improving EI in both published studies and in our own clinical groups. For example, in a skill group for young adults with ASD, we assess EI using trait-based measures and then teach about each area using examples and scenarios to illustrate, discussion in group to elucidate, and reflection on personal strengths and needs as measured with the Bar-On EQ-i:S. Using this approach before and after teaching content and skills, we have found that overall EQ improved significantly in this group and that all subcomponents on the measure demonstrated a trend toward improvement (see North & Montgomery, 2012; North, Montgomery, & Stoesz, 2014). While it hasn't been directly researched beyond pilot studies at this point, we anticipate that this approach can be useful in other age groups and may be an important aspect of working with atypical clinical groups in particular, given that individuals with social cognition difficulties in general do not necessarily acquire on this information intuitively.

Mindfulness-Based Interventions

Mindfulness, or the practice of intentionally attending to present experiences in the moment with curiosity, acceptance, and without judgment (Kabat-Zinn, 1990), has been gaining increased attention in research and applied practice as an approach to promoting social and emotional health. While not specifically created to target EI, many mindfulness-based approaches are compatible and overlap with the goals of EI training. In fact, higher mindfulness levels are associated with better developed trait EI, higher levels of positive affect, increased life satisfaction, and lower levels of negative affect (Schutte & Malouff, 2011), with trait EI mediating the relation between mindfulness and higher positive affect, lower negative affect, and greater life satisfaction. Higher mindfulness levels have also been associated with lower stress levels and better use of coping strategies (Weinstein & Ryan, 2011), as well as clarity of emotional states, relationship satisfaction, and ability for emotional repair (see Roche, Haar, & Luthans, 2014 for a review).

Moreover, in children and youth, mindfulness practices have been associated with improved emotion regulation, self-control, attention, concentration, social-emotional competence, and stress reduction (See Wisner, Jones, & Gwin, 2010; Zelazo & Lyons, 2012). Adults have reported reduced stress and anxiety (Benn, Akiva, Arel, Roeser, 2012), enhanced well-being and self-compassion (Orzech, Shapiro, Brown, & McKay, 2009), and improved attention and working memory (Chiesa, Celati, & Serretti, 2011) following mindfulness training. Additionally, teachers who have received training in mindfulness report decreased job-related

stress, increased mindfulness, and more effective classroom management (see Meiklejohn et al., 2012). Given its potential for supporting the social and emotional health of both staff and students within the school setting, it is not surprising that mindfulness-based programs are becoming increasingly popular within the realm of education, and particularly as a tool to enhance SEL. While there are many limitations to the current literature and research on specific programs is only just emerging, it seems that mindfulness curricula offer great potential for promoting the academic, social, and emotional well-being of students of all ages. Consequently, it is not surprising that numerous school-based mindfulness curricula are being introduced. Several of these programs are outlined below (for a comprehensive overview of available school-based mindfulness programs, see Meiklejohn et al., 2012).

.b Foundations The *.b Foundations* program (pronounced “dot-be foundations”) offers an introduction to mindfulness for adults working directly with children and adolescents within a school setting. Developed by the Mindfulness in Schools Project (MiSP), *.b Foundations* provides staff with the foundations of mindfulness through 8 sessions and an informational “taster” session that is offered prior to the start of the 8-week program. This taster session is intended to introduce the principles underlying mindfulness and to dispel and clarify common myths. *.b Foundations* is intended to enhance the well-being of educational staff, which may help to improve the learning environment for students. Additionally, *.b Foundations* provides teachers with foundational knowledge, experiences, and understanding that are emphasized as critical to successfully implementing mindfulness-based programs directly with students in the classroom. In fact, MiSP requires adults to take an 8-week secular mindfulness course (like *.b Foundations*) before attaining training that would allow them to teach *.b*, a mindfulness school curriculum for children and youth (ages 11–18), or *Paws b*, a mindfulness curriculum for younger children (ages 7–11). Teachers who have completed the *.b Foundations* program report reduced levels of stress and increased well-being, mindfulness, and self-compassion (Beshai, McAlpine, Weare, & Kuyken, 2016).

Once teachers and/or support staff have gained sufficient training, they may also introduce mindfulness to their students within the classroom through a wide selection of programs. Numerous qualitative and systematic reviews have found that the introduction of mindfulness within the classroom is associated with improved self-concept, social skills, attention, stress, emotional coping, emotion regulation, affective strengths, and resilience, as well as decreased anxiety and depressive symptoms (see Langer, Ulloa, Cangas, Rojas, & Krause, 2015; Rempel, 2012; Weare, 2012; Wisner et al., 2010; Zenner, Herrnleben-Kurz, & Walach, 2014). It should be noted, however, that much of the research in this area has involved small homogenous samples, methodological limitations, and diverse program components, suggesting that further exploration is needed (Langer et al., 2015; Zenner et al., 2014).

.b and Paws b *.b* (which stands for “Stop, Breathe, and Be!”) is a mindfulness-based program developed by MiSP for students between 11 and 18 years of age (see

mindfulnessinschools.org). This program draws on the principles of mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1990) and mindfulness-based cognitive therapy (MBCT; Kuyken et al., 2013; Segal, Williams, & Teasdale, 2002). This research-based theoretical foundation provides some evidence for the validity of this approach; however, as mentioned, outcome research is very preliminary at this time. The program involves ten weekly scripted lessons (including an introductory lesson) that can be delivered by trained teachers in classrooms or in small group settings for youth. During these sessions, students are introduced to mindfulness through presentations that involve visuals, film and sound clips, as well as demonstrations and individual exercises. It should be noted that *.b* is considered to be an education program and is not intended as a replacement for therapy. While research on *.b* is in its infancy, research evidence indicates decreased stress and depressive symptoms and increased well-being in students who completed the program (Kuyken et al., 2013).

In addition to the *.b* curriculum, MiSP also offers *Paws b*, a shorter mindfulness-based program directed toward younger children in schools, sports clubs, and other educational settings (ages 7 and 11). Just as in *.b*, this program involves prepared presentations that include visuals, film clips, and exercises. Trained teachers can deliver *Paws b* over the course of six 1-h lessons or through twelve 30-min lessons. Research has found that children who participated in the *Paws b* program enjoyed the program, demonstrated improved metacognition, and self-reported decreases in negative affect (Vickery & Dorjee, 2015). However, research is preliminary at this stage for this age group and as such should be viewed as a promising option that is yet to acquire a sound evidence-base, aside from its sound theoretical foundation.

Learning to BREATHE Learning to BREATHE (L2B; Broderick, 2013) offers an alternative mindfulness-based program for students across adolescence through curriculums for younger students (i.e., grades 5 through 8 or 9) and for older students (i.e., grades 8 through 12). While integrating principles of MBSR, L2B offers a shorter program that has been tailored to recognize the developmental needs of youth and the demands of the classroom setting. Over the course of 6 sessions or 18 shorter sessions, the program incorporates 6 key themes into discussions and activities that parallel the first 5 letters in the word BREATHE (i.e., body, reflections, emotions, attention, tenderness, and healthy habits); the sixth letter in the acronym (“E”) corresponds with the overall goal of L2B (i.e., empowerment/gaining an inner edge). Essentially, through mindfulness instruction, L2B aims to promote improved attention, emotion regulation, emotion recognition, self-awareness, stress management, and academic performance. Completion of the L2B curriculum has been associated with improved emotion regulation; increased levels of calmness, relaxation, and self-acceptance; and reduced levels of stress, negative affect, and depressive symptoms (Bluth et al., 2016; Broderick & Metz, 2009; Metz et al., 2013).

MindUP Developed by the Hawn Foundation (see thehawnfoundation.org), MindUP offers a mindfulness-based curriculum to promote social and emotional learning which incorporates principles from cognitive neuroscience, positive psychology, and mindfulness training. MindUP provides a tailored curriculum for students across three separate age groups (i.e., prekindergarten to grade two, grades

three to five, and grades six to eight). This program is intended to improve social and emotional literacy skills, academic performance, sustained attention, communication skills, and stress reduction through 15 lessons that can be delivered in the classroom setting. Training is available for teachers who are interested in implementing MindUP within their classroom, although training is not required. Students who have participated in MindUP have demonstrated improved cognitive control and selective attention, increased peer acceptance, decreased symptoms of depression and aggression, and greater self-reported well-being, pro-social behavior, empathy, optimism, emotional control, perspective taking, and mindfulness (Schonert-Reichl et al., 2015; Schonert-Reichl & Lawlor, 2010).

Still Quiet Place Still Quiet Place (STQ; Saltzman, 2014) provides yet another approach to teaching the foundations of mindfulness, based in MBSR principles. This particular curriculum is tailored for use with children in grades three through seven and involves eight sessions that can be offered to groups composed solely of children or to groups that include both children and their parents/caregivers. Each class involves practices, discussion, and activities to introduce mindfulness, the “Still Quiet Place” that can be found through mindfulness, and the skills needed to respond to daily situations rather than react to them. At this time, there is limited research on the effectiveness of this approach, and as such it is recommended that any use be viewed in this context.

Mindful Schools Mindful Schools (see mindfulschools.org) provides an approach to integrating mindfulness into classrooms, after-school programs, clinical settings, and homes and has been specifically developed to support teachers and students in under-resourced schools. Mindful Schools offers a 30-module curriculum for students in kindergarten through grade 5 and a separate 25-module program for students in middle school and high school. Training for educators through is provided through *Mindfulness Fundamentals*, which introduces teachers to mindfulness and emphasizes personal practice. Further, *Mindful Educator Essentials* provides teachers with the tools needed to implement the Mindful Schools curriculum within the classroom. Given the importance of personal practice, *Mindfulness Fundamentals* is a prerequisite for *Mindful Educator Essentials*. Research on this approach is preliminary; however, the developer’s website provides some (unpublished) data about effectiveness, and from this source it appears that this program has been found to decrease behavioral problems, particularly in boys where a medium effect size was found. In addition, the impact for self-care was significant for boys but not for girls (Fernando, 2013).

Summary and Future Direction

SEL- and EI-based interventions are receiving increased attention and gaining momentum in schools, given the challenges staff face meeting not only the academic needs but also the behavioral and social-emotional needs of diverse student

populations. Twenty-first-century learners need to be prepared not only for the academic demands in their future but also with transferable skills that can be used in relationships, workplaces, and everyday situations (Pellegrino & Hilton, 2013). Focusing on social-emotional skills is important not only for social-emotional development but in light of the impact on academic outcomes, mental health, quality of life, and the development of coping skills. Additionally, the challenges of the modern classroom place a high level of stress on school staff, and consequently, targeting EI and SEL not only for students but for entire school populations and ideally communities is the recommended approach to enable optimal development/experiences and wellness for everyone in schools.

While SEL and EI approaches hold potential to improve outcomes in general, at this point evidence for effectiveness is only just emerging and as such should be considered preliminary. However, some programs demonstrate more evidence than others and are more practical and appropriate for particular school settings. Consequently, we advise school staff to consider the overriding guidelines outlined earlier in the chapter to assist in selecting, implementing, and monitoring interventions (see also Chap. 8 by Humphrey, this volume).

In terms of “atypical learners,” diverse groups of children attend modern classrooms and many struggle not only with academic issues but with the social-emotional demands within and outside of schools. Preparing learners to better understand their own emotions and use this enhanced understanding to assist in using and managing emotions is a key skill set many students do not optimally develop. Difficulties in this area can lead to poor experiences in school and certainly set the stage for ongoing difficulties across the life-span if left unaddressed. Given the high rate of mental health issues in school-aged populations and adulthood, programming for enhanced understanding and management of emotions is a clear need in schools. Indeed, if you asked most adults what they are feeling in any current moment, many would be challenged to adequately describe their experiences as emotions can be layered and conflicting at the same time and change as we experience them. These experiences are universal; however, increasing emotional knowledge and literacy can facilitate improved recognition and subsequent action based on emotions, in addition to reducing stigma that many may feel when experiencing a high level of negative emotions. Ultimately, good SEL or EI programs need to take this into account. Consequently, the most complete programs include not only coping or emotion management strategies but a comprehensive instructional component highlighting important aspects of emotions that lead to more accurate appraisals of individual feelings or feelings of others. We recommend that educators use programs that ensure that appropriate content is provided, along with experiential learning that includes things like role-play, reflection, and connections to meaningful applications in everyday life.

Further, while SEL and EI programs are rapidly emerging, mindfulness-based programming offers an aspect that many do not, which may enhance the ability to reflect on and applying knowledge and skills in everyday situations. For example, many mindfulness-based approaches emphasize the idea that we can choose to be swept away by our emotions or, alternatively, apply scientific-like approaches to

observe emotions, thoughts, and sensations in a way that we suggest will enhance everyday abilities to accurately identify and manage emotional experiences. Moreover, many mindfulness-based programs provide specific, research-based coping strategies that may indeed improve everyday competence in the social-emotional realm. Given this information, it is very likely that modifications to existing programs and new programming will incorporate these practices given the compatibility with EI and SEL. However, at this time, no existing school programs adequately integrate both approaches nor does the research document this concept sufficiently at this point in time. Consequently, these suggestions should be considered as preliminary, given the current limitations in research.

In spite of the emerging nature on EI and SEL interventions, it is clear that a large number of students (and many staff members) deal with difficult situations daily and could benefit from strategies that target emotional well-being and skills related to this general outcome. It is even more evident that poor EI- and SEL-related impairments predict important academic and life outcomes in typical and atypical students, and a large body of research documents this situation and points to the notion that EI can be increased with strategic programming. In light of this context, academic and applied researchers need to examine programming to ensure it indeed meets the needs of twenty-first-century schools and that outcomes are in line with key EI and SEL targets.

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Chapter 11

Emotional Intelligence in Sports and Physical Activity: An Intervention Focus



Sylvain Laborde, Emma Mosley, Stefan Ackermann, Adrijana Mrsic,
and Fabrice Dosseville

Abstract The aim of this chapter is twofold: first, to introduce the reader to the role of emotional intelligence (EI) in sports and physical activity, and second, to have an intervention focus achieved through applied activities that enable the development of different dimensions of EI. The chapter begins with an introduction to the theory that underpins EI in sports – the tripartite model comprising knowledge, ability, and trait levels. Subsequently, measurement issues are addressed in regard to instruments measuring the ability and trait aspects of EI. In continuation, the role of EI is discussed within the sport performance domain, specifically in athletes, coaches, and officials, as well as its role in physical activity. Finally, an applied perspective of EI training in sport performance is presented, along with EI training through sports and physical activity. Thirteen EI training activities are suggested that are based on the tripartite model and target the five main dimensions of EI: identifying, expressing, understanding, regulating, and using emotions. Such activities aim to contribute to the dissemination of EI training at school, which may have an important further impact on performance, society, and health policies.

S. Laborde (✉) · S. Ackermann · A. Mrsic
Department of Performance Psychology, German Sport University Cologne,
Cologne, Germany

Normandie Université, EA 4260 Caen, France
e-mail: s.laborde@dshs-koeln.de

E. Mosley
Solent University, Southampton, UK

F. Dosseville
Normandie Université, EA 4260 Caen, France

Introduction

During the semifinals of the 2011 US Open Tennis Championship, Novak Djokovic faced Roger Federer, players who are both considered masters of the physical and technical aspects of tennis. After approximately 3.5 h, Federer had two match points, just like the previous year, and was therefore close to reaching the finals and perhaps winning his sixth US Open title. In this stressful situation, they were obviously both under enormous pressure, and what happened next in this crucial moment was quite a shock. Djokovic was able to regulate and use his emotions better than Federer; he saved the two match points, qualified for the final, and went on to win the US Open title.

In this kind of stressful situation, emotional intelligence (EI) can make the difference between winning or losing a sport event, illustrating its domineering influence on sport performance. EI refers to the individual responses to intrapersonal or interpersonal emotional information and encompasses the identification, expression, understanding, regulation, and use of emotions (Mayer & Salovey, 1997; Petrides & Furnham, 2003). Given the prevalence of such pressure situations in sports, it seems necessary to seek a better understanding of the role played by EI in this domain.

In order to give an overarching impression regarding the importance of EI in sports, we divided the different categories of sports into three sections:

1. Individual sports without a direct opponent: examples of sports fitting this category would be track and field, gymnastics, or swimming. Here EI is particularly relevant to perceiving one's own emotions, like fear or anxiety, and to regulating and using them where necessary to perform at one's best.
2. Individual sports with a direct opponent: examples of sports fitting this category would be tennis, boxing, and table tennis. In addition to the elements mentioned previously, when facing a direct opponent, it is advantageous to be able to perceive, regulate, and use the opponent's emotions as well as one's own emotions. For example, the boxer Muhammad Ali said he talked endlessly to his opponents and provoked them to encourage mistakes.
3. Team sports: in team sports like basketball, soccer, or handball, it is particularly relevant for success to not only focus on one's own emotions and the opponent's emotions but also to perceive, regulate, and use the emotions of the teammates. If, for example, a teammate had recognized Zinedine Zidane getting angry because of being provoked by Materazzi, he might have been able to prevent Zidane's infamous headbutt, which led him to being sent off in the finals of the 2006 FIFA Soccer World Cup.

The aim of this chapter is twofold: first, to review the way EI can influence sport performance and then how sport participation could contribute to EI training. We begin with a short introduction to a theoretical perspective on why and how EI is important for peak performance in sports. Following this, we present the different approaches to defining and measuring EI, before introducing a model integrating the different EI approaches, the tripartite model of EI. Having established these

foundations, we then review the research on EI among individuals involved in sport and physical activity. The final section demonstrates how EI training can be used to improve sport performance and concludes with an original perspective on how EI training could be realized through sport participation.

Underpinning Theory: Tripartite Model of EI

The tripartite model of EI (Mikolajczak, 2009) consists of three levels: knowledge, ability, and trait (see Fig. 11.1). The *knowledge* level refers to knowing EI-related techniques that help keep focus on the task and regulate one's own emotions but does not necessarily mean that one is able to put this knowledge into practice. The *ability* level refers to being able to perform a certain emotion regulation strategy when one is explicitly prompted to do so; however it does not necessarily mean that one will do so frequently nor in every situation. Finally, the *trait* level refers to habitual dispositions – what people usually do when dealing with emotional situations.

Each of these three EI levels has potential connections when considering sport performance, but it is not sufficient on its own to explain performance outcomes. Rather, the three levels interact with one another to produce different EI profiles that have differential implications for sport performance. To illustrate, imagine an athlete facing a stressful situation during a competition, like shooting a penalty in the last minute of a soccer match that makes the difference between winning 1:0 or a draw. At a knowledge level, he might know which techniques would help him focus on the task and regulate his emotions (high knowledge EI) but might not be able to execute those techniques (low ability EI) and therefore couldn't perform at his peak. Alternatively, consider another soccer player who might be able to focus his attention when shooting a penalty at training by using a specific routine when instructed

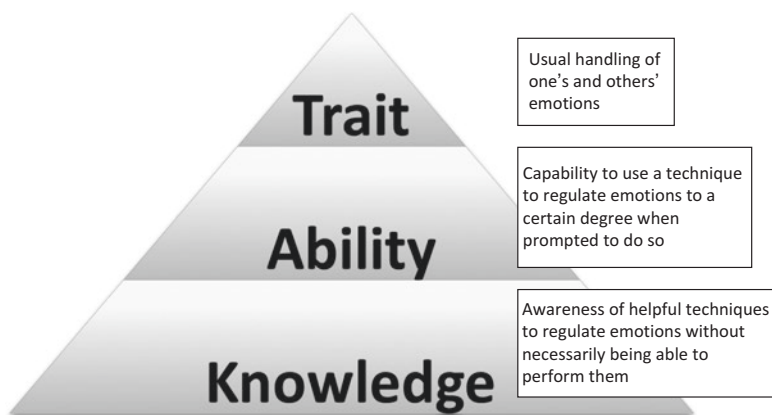


Fig. 11.1 The three levels of the tripartite model of EI

to do so by his coach (high ability EI) but might not be using this technique on a regular basis (low trait EI), let alone during a stressful competition. By this logic, the top-performing soccer player would not only know which specific emotion regulation technique might help him handle the pressure surrounding the penalty shooting (high knowledge EI), but he would also be able to perform it when prompted to do so (high ability EI), as well as inclined to use it regularly when situations require it (high trait EI).

One advantage the tripartite EI model offers, if understood properly, is the connection between the three levels (Fig. 11.1), which might be helpful for sport psychologists, as well as for coaches and athletes, paving the way to EI training, which forms the focus of the last part of this chapter. Furthermore, the tripartite model enables integration of the previously opposing perspectives, namely, EI as an ability (Mayer, Roberts, & Barsade, 2008; Mayer & Salovey, 1997; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume) versus EI as a trait (Petrides, 2010; Petrides & Furnham, 2003; see also Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). Going beyond this opposition proves to be beneficial for sports performance, since both levels are important for success in sports (Laborde, Dosseville, & Allen, 2016). Regarding sports performance, it is usually acknowledged that ability EI predicts short-term performance, while trait EI is beneficial for the long-term (Laborde et al., 2016).

Assessment of EI

Ability EI: Maximal Performance Tests

EI as an ability can be measured with the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002). This test directly measures one's ability to perceive, use, understand, and regulate emotions by asking respondents to perform a variety of standardized IQ-style tasks (usually presented on a computer) designed to measure a person's capacity for reasoning with emotional information. Unlike self-report questionnaires, performance-based measures like the MSCEIT are less vulnerable to faking in high-stakes situations, where respondents may be motivated to create a positive impression by pretending to be more emotionally intelligent than they actually are, such as for a job interview. Such manipulation of EI levels is easy in a self-report questionnaire but is less likely to happen within a task that measures actual performance (Day & Carroll, 2008). Therefore, the MSCEIT is suitable for all kinds of corporate, educational, research, and therapeutic settings and has been first considered as the most suitable to the sport domain, because of the common focus on performance (Meyer & Zizzi, 2007). Other measures of EI abilities are reviewed in Chap. 2 by Fiori and Vesely-Maillefer (this volume).

Trait EI: Self-Report Questionnaires

EI at the trait level is usually assessed with self-report questionnaires. Questionnaires are easier to administer than ability EI measures that require performance testing via a computer. Hence, trait EI is much more widely researched in sports, and multiple questionnaires exist to measure trait EI (for an overview, see Laborde et al., 2016). In this chapter we focus on two questionnaires: the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009a) and the Profile of Emotional Competence (PEC; Brasseur, Grégoire, Bourdu, & Mikolajczak, 2013). However, there are other widely used EI questionnaires (reviewed in Chap. 3 by Petrides et al., this volume), including the Bar-On Emotional Quotient Inventory (Bar-On, 1997), the Schutte Emotional Intelligence Scale (Schutte et al., 1998), the Trait Meta-Mood-Scale (Salovey et al., 1995), and the Genos Emotional Intelligence Inventory (Palmer, Stough, Harmer, & Gignac, 2009).

Trait Emotional Intelligence Questionnaire (TEIQue) The TEIQue has a number of attractive features, including strong theoretical foundation, comprehensive coverage of the trait EI sampling domain, and favorable psychometric properties (Petrides, 2009a, 2009b), and it has been validated for sports (Laborde, Dosseville, Guillén, & Chávez, 2014). The TEIQue exists in a long version consisting of 153 items and a short version consisting of 30 items, rated on a 7-point scale (Petrides, 2009b). While the short version measures only the 4 key factors (Siegling, Vesely, Petrides, & Saklofske, 2015), the long version additionally measures 13 facets on which the 4 key factors are based, plus 2 auxiliary facets (see Table 11.1). The four key factors are the following: well-being (“Most days I feel great to be alive”), sociability (“I would describe myself as a good negotiator”), emotionality (“I would describe myself as a calm person”), and self-control (“I know how to snap out of my negative moods”). Two auxiliary facets (adaptability and self-motivation) are independent of the others; however, they still contribute significantly to understanding how we deal with other people and our emotional environment (Petrides, 2009b). Age-appropriate adaptations of the TEIQue are also available for adolescents aged 13–17 (Petrides, 2009a) and for children aged 8–12 (Mavroveli, Petrides, Shove, & Whitehead, 2008).

Profile of Emotional Competence (PEC) The PEC is a relatively new instrument to measure trait EI (Brasseur et al., 2013). The PEC consists of 50 questions which aim to measure individual differences in the identification (“When I am touched by something, I immediately know what I feel”), understanding (“I don’t always understand why I am stressed”), expression (“I am good at describing my feelings”), regulation (“When I’m sad I find it easy to cheer myself up”), and use (“I can easily get what I want from others”) of the emotions of oneself and others (Brasseur et al., 2013). Although the PEC has not yet been used in the sports settings, we use the PEC’s five dimensions as a basis for our suggestions for the training of EI through sport for several reasons. First and foremost, the PEC is the only questionnaire able to measure each of the five core emotional competencies (i.e., identification,

Table 11.1 Factors and facets of the Trait Emotional Intelligence Questionnaire

Factors	Facets	Brief description
Well-being	Optimism	Confidence and likelihood to focus on the positive aspects of life
	Happiness	Positive mental attitude, pleasant emotional states, primarily directed toward the present moment rather than the past or the future
	Self-esteem	Self-confidence and faith in one's abilities
Sociability	Emotion management	Ability to influence other people's feelings
	Assertiveness	Courageous, forthright, frank, and willing to stand up for one's views and opinions
	Social awareness	Social skills and ability to network
Emotionality	Empathy	Acknowledging and taking in someone else's perspective
		To see things from another person's point of view
	Emotional perception	Insightful and clear about personal feelings and the feelings of others
	Emotional expression	Communication of one's feelings to others
Self-control	Relationships	Capability to have fulfilling personal relationships
	Emotion regulation	Short-, medium-, and long-term control of one's own feelings and emotional states
	Impulsiveness	How reflective and how likely one gives in to urges
	Stress management	Capability to cope with and perception of stressful situations
Auxiliary facets	Adaptability	Flexibility and willingness to adapt to new conditions
	Self-motivation	Drive and persistence in the face of adversity

understanding, expression, regulation, and use), separately for one's own as well as for others' emotions (Brasseur et al., 2013). Furthermore, by measuring these five core emotional competencies, the PEC represents an added value when the objective is to obtain a detailed profile of emotional competencies for research and/or clinical purposes. Thus the PEC allows for the adjustment of interventions to specific profiles, because it offers the necessary information to effectively identify an individual's trait EI profile. Finally, the PEC is one of only few trait EI measures to assess the intrapersonal understanding of emotions. According to Mikolajczak, Brasseur, and Fantini-Hauwel (2014), out of the ten dimensions recorded by the PEC, the ability to understand one's emotions has the highest predictive power regarding physical health outcomes. Thus this particular dimension is of relevance for sports. On the one hand, training the understanding of one's emotions through sport might be beneficial for athletes, for example, who want to perform better under pressure or athletes undergoing rehabilitation who want to recover from an injury. On the other hand, it might be advantageous for prevention of choking under pressure and prevention of injuries and diseases.

Research on EI in Sports and Physical Activity

Jack Johnson, the first Black heavyweight world champion in boxing, used to provoke some of his opponents to find out how they reacted when they were angry. Being underprivileged, he could not afford a coach, so he participated in as many fights as possible. Although he could have knocked out a lot of his opponents in early rounds, he drew out the fights until the 20th round. During the fights, he closely observed and studied his opponents, especially their reactions to his provocations. This way he was not only able to find out their style, but he could also sense their emotional weaknesses and seemed to be always a step ahead.

It is now well acknowledged that EI influences sport performance (Laborde et al., 2016). We use the definition of ability EI by Mayer et al. (2008) and trait EI by Petrides (2010). According to these definitions, EI describes how one reacts to intrapersonal or interpersonal information about emotions. Since EI was first formulated in the early 1990s, EI has been well established as an important factor in educational and work-related performance. However, it took several years until a connection between EI and sport was made. Now the existing evidence is growing steadily and continually underpins the importance of EI in sport performance (Laborde et al., 2016). Obviously, the requirements for excellent performance in sports are diverse and challenging. To compete on a professional level, athletes have to motivate themselves on a regular basis to achieve their long-term goals which are a product of punishing training and continual skill improvement. Furthermore, coping with the stress and pressure from their high standards and by others in training, competition and unavoidable failures along the journey are further challenges an athlete has to live up to. As Michael Jordan said, “I have failed over, and over, and over again – that is why I succeed.”¹ And lastly, during a competition the athlete needs to deal with their own emotions as well as with the emotions of teammates, coaches, referees, spectators, and opponents (Laborde et al., 2016). As a result, the athlete has to comprehend many emotions, not just their own, and this is the same for many individuals involved in sporting performance. In the next subsections, we review how EI influences performance for different sporting individuals, including athletes, coaches, spectators, and referees and how it plays a role in physical activity.

Athletes

EI and performance In the introduction we already demonstrated how EI may play a role in a copious range of sports. In general, research shows that both female and male athletes who score higher on EI measures (ability and trait) are more likely

¹Interview retrieved on the 3rd of February 2016 –<http://www.youtube.com/watch?v=JA7G7AV-LT8>.

to be successful than athletes who score lower (Laborde et al., 2016). At a subjective level, athletes with higher trait EI scores showed higher performance satisfaction (Laborde, Dosseville et al., 2014). With objective performance parameters, trait EI was related to better whole season performance (Perlini & Halverson, 2006; Zizzi, Deaner, & Hirschhorn, 2003). Furthermore, Tok, Binboğa, Guven, Çatikkas, and Dane (2013) were able to find a positive relation between trait EI and maximum voluntary isometric contractions (with or without a mental stressor), which is a standardized measure of muscle strength. Regarding emotions, the current literature offers evidence of an important connection between EI and the emotions athletes perceive before and during a competition: high trait EI is connected to a greater experience of pleasant emotions (Lane & Wilson, 2011) and to a lower anxiety level prior to competition (Lu, Li, Hsu, & Williams, 2010).

EI and neurophysiological factors The relationship between EI and an athlete's neurophysiological stress response and performance has also shown encouraging results. The two biomarkers we focus on are the heart rate variability – depicting vagal activity, a resource that one has to face stress situations (Thayer, Hansen, Saus-Rose, & Johnsen, 2009), and the stress hormone cortisol. Previous research has already established a link between these neurophysiological stress responses of an athlete and trait EI (Laborde, Brüll, Weber, & Anders, 2011; Laborde, Lautenbach, & Allen, 2015; Laborde, Lautenbach, Allen, Herbert, & Achtzehn, 2014). The results that have been found in the different studies give initial evidence for a positive relation between trait EI (well-being factor) and resting vagal tone as well as trait EI (emotionality factor) and vagal tone during a task (Laborde, Lautenbach, et al., 2015). This suggests that athletes with higher trait EI have better physiological resources to cope with competitive stress. Regarding the relation between cortisol and trait EI, Laborde, Lautenbach et al. (2014) found that athletes with higher trait EI had a lower cortisol response after exposure to the stressor in comparison to athletes with a lower trait EI score. Thus demonstrating the capability of trait EI to act as a protective shield against stress, which can be seen here at the hormonal level.

EI and psychological skills In addition to an athlete's neurophysiological stress responses, EI has also been investigated in relation to coping strategies (see Chap. 4 by Zeidner & Matthews, this volume). Coping refers to the athlete's constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the athlete's resources (Lazarus & Folkman, 1984). Overall, higher trait EI appears to be linked to more frequent use of psychological skills such as activation and relaxation techniques, emotional control, goal setting, imagery, and self-talk during competition and practice (Lane, Thelwell, Lowther, & Devonport, 2009). One important aspect might be the relationship between high levels of trait EI and task-oriented coping strategies (Laborde, Dosseville, et al., 2014; Laborde, You, Dosseville, & Salinas, 2012), which often are identified as the most effective way to approach stress when people perceive to have some control over the situation (Nicholls & Polman, 2007).

Individual versus team sports Regarding the differences in EI between athletes from team sports and athletes from individual sports, no differences have emerged yet in the literature (Kajbafnezhad, Ahadi, Heidarie, Askari, & Enayati, 2011; Laborde, Dosseville, et al., 2014; Laborde, Guillén, & Watson, 2017). While the main focus is usually on EI at the individual level, a novel perspective taken by Crombie, Lombard, and Noakes (2009) showed that the average ability EI of six national level cricket teams predicted objective team performance parameters (i.e., the final log points standing for the team at the end of a competition). These findings confirm the assumption we made in the introduction that EI is important both in individual and team sports.

Coaches

Given its role in relationships and dealing with one's own and others' emotions, EI is also extremely relevant in coaches. Pep Guardiola, the coach of the German soccer club FC Bayern Munich from 2013 to 2016, once talked about how important it is for a coach not to treat every player the same but to find out how each individual player needs to be approached in order to achieve peak performance. While the one player might perform better after being criticized in front of the whole team, another might prefer being corrected in private. EI, therefore, is vitally important for a coach to be able to discover the appropriate way to emotionally manage each player. It seems obvious that empathy and emotional contagion are assumed to be essential in coaching (O'Neil, 2011). O'Neil (2011) further judged a coach's ability to create a positive and challenging emotional climate as a major part of relationships between athletes and coaches and the development of these relationships. Studies investigating EI in coaching found that coaches scoring higher in trait EI showed more confidence in their leadership capabilities (Magyar et al., 2007) and that high levels of trait EI correlated with higher coaching efficacy (Hwang, Feltz, & Lee, 2013; Thelwell, Lane, Weston, & Greenlees, 2008).

Officials

Apart from athletes and coaches, EI might also be necessary for optimal performance of officials in sports. When we give reference to "officials" in the sporting context, we refer to umpires, referees, and judges. Especially in team sports like soccer, American football, basketball, etc., the referees are in contact with the players and need the ability to keep calm in stressful situations. They also have to deal with the constant criticism of spectators, players, coaches, and in some cases the media. Therefore, their way of communicating is of critical importance (Dosseville, Laborde, & Bernier, 2014). When considering the role of EI in decision-making (Laborde, Dosseville, & Scelles, 2010) and interpersonal relationships, it can be

expected that EI is essential in order to become a successful official in sport. However, research to date surrounding the EI of sport officials has not been investigated (Laborde et al., 2016).

EI and Physical Activity

EI plays also a role in leisure-time physical activity adherence (Laborde et al., 2017; Solanki & Lane, 2010). Firstly, being able to motivate oneself may be even more important in leisure-time physical activity than it is for competitive sport. An athlete, training in a team and/or with a professional coach, is potentially more likely to go to training and exercise when they do not feel like it. Physical activity, however, often relies on one's own ability to motivate oneself to exercise. Furthermore, physical activity during leisure-time, with a training partner, may be an opportunity that can be used to deal with one's own emotions or improve and build relationships. By talking about experiences and emotions with a training partner, one is able to gain a deeper understanding of the partner's feelings and the subsequent actions that are caused by those feelings. In conclusion, EI arguably plays a significant role in both organized sports and physical activity (Laborde et al., 2016).

EI Interventions in Sports

Now that we have established the importance of EI in sports and physical activity, two questions remain. Firstly, can EI be trained in the sport context and if so, how? Secondly, can EI be increased through sports participation?

In this section we focus on how EI can be enhanced in sports through specific interventions. For example, a sport psychologist might work with a soccer player who has a tendency to beat himself up when he misses a clear shot on goal and thus aims to develop their capability to regulate emotions and focuses on positive behaviors. To date, only three studies regarding this topic exist, all of which were able to successfully increase EI in athletes. Crombie, Lombard, and Noakes (2011) evaluated the ability EI of 24 cricketers who were divided into a control group and an experimental group. The latter received ten 3-h sessions, targeting the four branches of Mayer and Salovey's (1997) ability EI model (emotion perception, facilitation, understanding, and management), which led to greater increases in their ability EI compared to the control group. Another intervention study (Barlow & Banks, 2014) was able to significantly increase self-efficacy and reduce anxiety in netballers through a single 30-min one-to-one coaching session. Both the control group and the experimental group completed measures of anxiety, self-efficacy, and team identification, while the experimental group received the same measures in addition to the intervention. This intervention consisted of an individual EI feedback session regarding their scores on the trait EI scale that was taken previously.

Finally, the third study (Campo, Laborde, & Mosley, 2016) investigated trait EI in 67 rugby players. In a similar fashion to the other two studies, the athletes were divided into an experimental ($n = 31$) and a control group ($n = 36$). The control group received the task of video analyses of games between the pre- and the post-test, while the experimental group participated in four one-to-one sessions throughout the season. The 45–90-min-long sessions took place every 5 weeks and consisted of special tools and exercises for rugby players. Between the sessions, the athletes were instructed to do further assignments such as homework as well as follow-up procedures. Comparing the results of the pretest and the posttest revealed that the intervention was able to increase specific aspects of trait EI significantly (i.e., social competence, emotion management, perception). However, global trait EI was not improved (Campo et al., 2016).

Enhancing EI Through Sport and Physical Activity

In this part of the chapter, we make suggestions on how EI might be trained through sport and physical activity. It is already noteworthy that sports participation is associated with higher trait EI (Laborde, Guillen, Dosseville, & Allen, 2015), although so far no causal link has been established. These suggestions are based on the five dimensions of the PEC and the tripartite EI model, with the underlying idea that training of the five PEC domains at the knowledge, and ability levels will improve their trait-level applications (see Fig. 11.2).

Training the knowledge level might consist of providing information about techniques that enhance EI, for example, certain coping strategies, improving communication skills, meditation techniques, etc. The next step, training the ability level, would be practicing these techniques or skills and learning to implement them in particular situations. Finally, when using the technique has been established as a

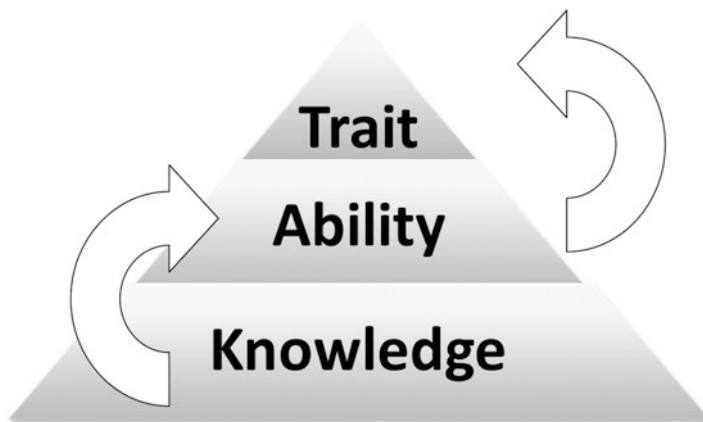


Fig. 11.2 Connections between the three EI levels to serve as a basis for EI training

habit and the athlete is able to use it appropriately on a regular basis, it can then be referred to as a trait. For example, a sport psychologist who works with an athlete who regularly loses his temper during competitions or even during practice might implement a technique to regulate emotions. Firstly, the psychologist would explain the technique and how it works (knowledge level). Secondly, the psychologist would put the athlete under pressure and in stressful situations in training, in order for the athlete to practice the particular technique. After a period of time, the athlete should be able to use it consciously during competitions (ability level). Ultimately, the athlete regulates his emotions automatically and without effort with the learned technique (trait level).

In the remainder of this chapter, we present the techniques designed to improve the different aspects of EI through sports participation, in accordance with the five PEC dimensions:

1. **Identification:** Identification, according to Brasseur et al. (2013, p. 2), refers to “being able to perceive an emotion [in oneself and others] when it appears and identify it.” Developing this skill is particularly important, because awareness of the emotions one feels might be the basis for being able to express, understand, and regulate them, and because the PEC subscales “identification” and “using the emotions of others” were most predictive of work performance, according to Brasseur et al. (2013).
2. **Expression:** Expressing emotions deals with “being able to express emotions in a socially accepted manner” (Brasseur et al., 2013, p. 2). This includes effectively telling other people how one feels and being able to listen and understand how to deal with situations in which other people talk about their emotions. In the latter part of the subscale, empathy plays a huge role, which might be of greater importance in team sports than in individual sports.
3. **Understanding:** Brasseur et al. (2013, p. 2) define understanding as the ability “to understand the causes and consequences of emotions, and to distinguish triggering factors from causes.” While a triggering factor of an emotion can be any kind of situation, thing, or person, the cause of the particular emotion is the interpretation of the situation, thing, or person based on previous experiences. In other words, the same situation can evoke completely different emotions in different people depending on their past experience (e.g., educational background) and subjective construal of the event.
4. **Regulating:** Regulation refers to “being able to regulate stress or emotions when they are not appropriate to the context” (Brasseur et al., 2013, p. 2). This applies to calming down, as well as pumping up oneself or others, for example, a teammate.
5. **Using:** According to Brasseur et al. (2013, p. 2), using emotions refers to “being able to use emotions to improve reflection, decisions, and actions.” It reflects the fact of knowing when to generate the appropriate emotions to achieve a desired outcome in the most effective way.

Table 11.2 Emotional intelligence dimensions trained through the particular activities

Activity	Identification		Expression		Understanding		Regulating		Using	
	Self	Other	Self	Other	Self	Other	Self	Other	Self	Other
1			X							
2		X	X				X			
3			X	X	X	X				
4	X									
5	X									
6		X	X	(X)						
7		X								
8							X	X		
9							X	X		
10					X					
11									X	
12							X		X	
13								X		X

Suggested Activities

In the following, we propose a catalogue of 13 activities aimed to develop EI through sports participation. For each of these activities, we mention which EI dimension is the focus and which type of sports and age it is suited for. Table 11.2 gives an overview of the suggested activities and the targeted EI dimensions.

Activity 1: Emotional Faces in Motion

- Trained EI dimension(s): Expression (self)
- Type of sports: Individual and team
- Suited for: Children <10 years old

Goal of the activity: The aim of this exercise is to practice expressing various emotions fitting the story-telling activity while moving.

Description: The activity is inspired by the role-play training to express emotions used in Nelis et al. (2011). It might be advantageous to check the children’s knowledge of emotions beforehand: Do they know the meaning of the different words? Do they know how to express the various emotions? If necessary, show them pictures or display the emotions beforehand. The children are divided into two or more teams, depending on the size of the group. The teams, called “the Smith family,” consist of 4–6 children, so every child runs relatively often and doesn’t have to wait too long until it’s his or her turn again. Each child takes over a role in the Smith family (e.g., father, mother, daughter, son, grandma, grandpa). Both families stand in a line behind their mark, approximately 15 m away from the turning point (see Fig. 11.3). The coach now tells a story. Whenever the children’s role is mentioned in the story, they run to the turning point and back to their spot on the bench. On their way, they can solve any kind of task, like transporting a balloon, dribbling a

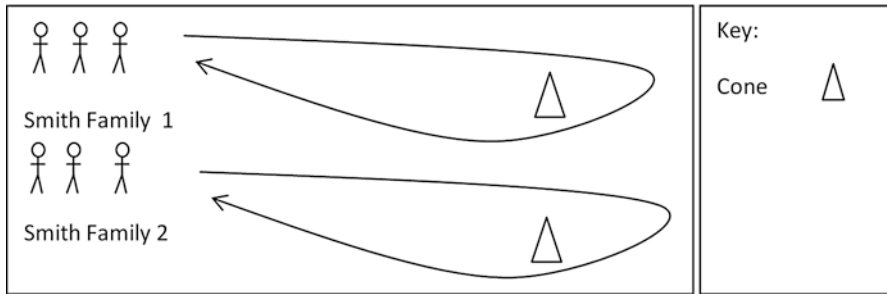


Fig. 11.3 Activity 1: “Emotional Faces in Motion”

soccer or basketball, run through a coordination ladder, etc. Whenever the role is mentioned in combination with an emotion, the children have to start to run toward the turning point and express this emotion on their way. For example, if the Smith family is visiting the zoo, one part of the story might sound as follows:

When they arrived at the tiger cage, father Smith looked amazed at the majestic animals [“Father Smith” would run towards the turning point expressing his amazement]. But daughter Smith seemed scared and quickly hid behind her mother, when one of the tigers made a sudden movement in her direction [“Daughter Smith” expresses fear]. So they went on to the next cage. Since it was a really hot day in the middle of summer and the whole Smith family felt exhausted [all children get up and express exhaustion while they run towards the turning point], they decided to take a break in the shadow of a large oak and happily eat a picnic they brought from home [all children run again expressing happiness].

Success criteria: The exercise is accomplished successfully when the children are able to express the emotions in the story that allows a spectator, who is not able to hear the story, to identify the targeted emotions.

Activity 2: Fire, Water, Lightning

- Trained EI dimension(s): Identification (other)
- Type of sports: Individual and team
- Suited for: Children <10 years old

Goal of the activity: The aim of this exercise is to practice one’s ability to identify emotions in others by observing their body language or facial expressions.

Description: This activity is inspired by different emotion recognition training protocols (e.g., Elfenbein, 2006; Williams, Gray, & Tonge, 2012). Similar to Activity 1, it might be advantageous to check the children’s knowledge of emotions: Do they know the meaning of the different words? Do they know how to express the various emotions? If necessary, show them pictures or demonstrate the emotions. The coach prepares three sheets of paper with pictures of different emotional facial expressions on each of them (see Fig. 11.4a–f). Whenever the coach holds up one of the papers, the children have to show the emotion and execute a particular task announced by the coach: these tasks can be anything, such as standing on one leg, sprinting to a corner of the field, doing push-ups, throwing a ball against the wall, etc. It is impor-

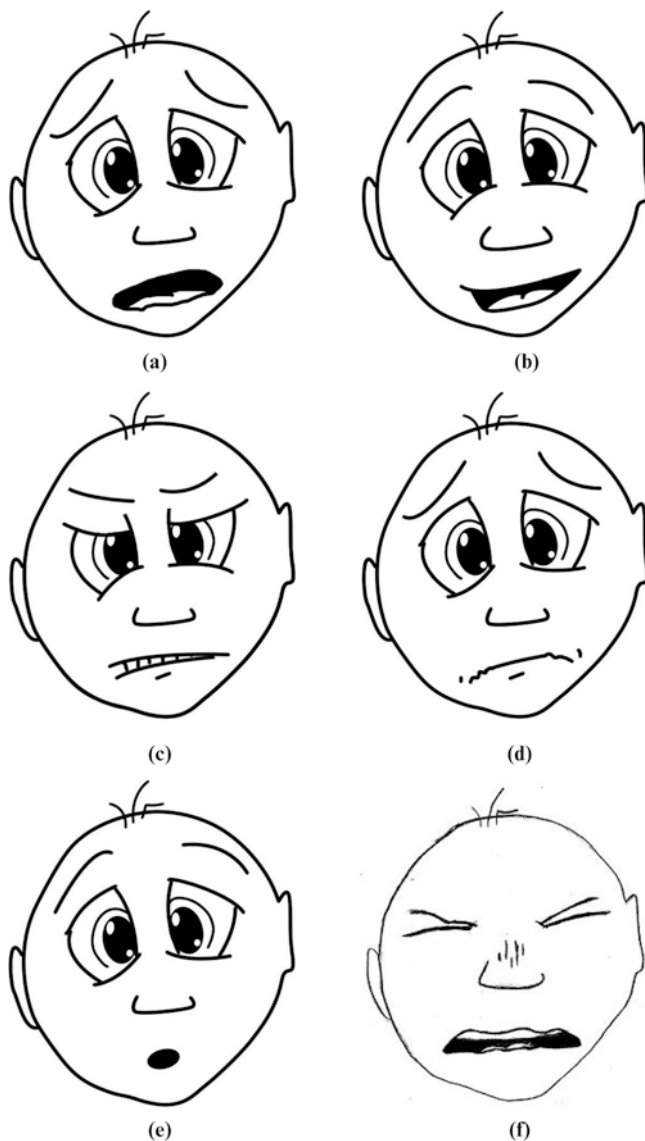


Fig. 11.4 Cards with facial expressions of emotion. (a) Fear; (b) Happiness; (c) Anger; (d) Sadness; (e) Surprise; (f) Disgust

tant, however, to link the same task to the same emotion in every lesson (happiness → push-up; fear → forming a line behind the coach; anger → swapping balls with another child), so the children have some security and routine. Also, once they are familiar with the first three emotions, further emotions can be introduced and linked to new tasks.

Success criteria: The exercise is considered a success when most of or, to the best of their ability, all the children are able to identify the emotions correctly. Subsequently, they perform the correct task by knowing what to do, not by imitating what the other children are doing.

Possible variations:

- This game is a great way to practice “power poses” (see Activity 9). Following a signal by the coach (or another sign), the children perform their favorite power pose in which they remain for a few seconds until the coach gives the command to move again.
- In an advanced team, that is, the children already know what the different emotions look like, the child can take charge and express the particular emotions to the rest of the group.
- Instead of showing pictures, the coach could also shout the emotions and have the children express them.
- Two to four children are given a ball which they pass on to their teammates. The child who throws (or shoots) the ball says an emotion that the child who receives the pass has to express.

Activity 3: Communication Exercise

- Trained EI dimension(s): Expression (self and other) and understanding (self and other)
- Type of sports: Individual and team
- Suited for: Athletes >10 years old

Goal of the activity: The goal of this activity is twofold. On the one hand, it aims to improve one’s ability to express and gain a deeper understanding of one’s own emotions. This is achieved by talking for a couple of minutes without interruption, which creates a much deeper topic base than usual conversation. On the other hand, it is to improve one’s ability to listen and therefore to improve the recognition of emotions expressed by other people. This also aims to improve one’s understanding of the other person’s emotions and their values and the reasons for behaving in a certain way. Overall, this might lead to a better climate between individual players and across the whole team.

Description: This listening and talking dyad activity was inspired by Mesibov (1984). This is a partner activity that can be utilized in organized sport as well as in recreational activities (see Fig. 11.5), during a break or at the end of training, for example. Firstly, athlete A talks for a predetermined period of time, then both athletes A and B are quiet to reflect on what has been said. After that, athlete B expresses his/her thoughts, and finally they both remain silent again. This is especially useful when the team spends a lot of time together. For example, in preseason training camps, the players have the chance to get to know themselves and each other better. Another opportunity to use this technique might be during the warm-up before training but also during training to elucidate a misunderstanding between two players in order to avoid a larger argument.



Fig. 11.5 Activity 3: Communication Exercise

Depending on the time that is available, the activity can be shortened or prolonged as required. An example of time duration would be in the warm-up, each of the four phases might be 3-min long. It may be that the athletes are instructed to combine it with a long-distance run or a biking tour; each of the four phases could be extended to 20 or 30 min or even longer. Evidently, the activity becomes more demanding the longer the four phases are; however, the rewards in terms of understanding the emotions of oneself and the teammate increase accordingly.

Success criteria: This activity is a success when the two athletes manage to keep silent and listen attentively, while their teammate is talking, and to talk about whatever comes to mind regarding the particular subject. A note about personal topics: e.g., What was one of the most shaping experiences in your childhood? What is your major purpose in life right now? What really scares you? What are typical situations that make you angry and how do you usually deal with them? These types of questions require a certain amount of trust and, hence, it is advantageous to suggest these kind of topics after athletes know each other well. Athletes that do not know each other as well may start with more superficial topics to help increase cohesion: e.g., What do you do for fun? Why do you participate in this kind of sport? What was the funniest thing you have experienced today?

Activity 4: Sporting Mindfulness

- Trained EI dimension(s): Identification (self and other), expressing (other), understanding (self and other), and regulating (self and other)
- Type of sports: Individual and team
- Suited for: Any age

Goal of the activity: The goal of this activity is to increase one's emotional self-awareness.

Description: Emotional awareness constitutes the basis of most of the five dimensions of EI. In other words, without awareness of the present moment an athlete cannot possibly identify, express, understand, regulate, or use emotions effectively. If one is unaware of the things that happen around or inside oneself, it is impossible to perceive and subsequently identify the current emotion, which may lead to a lack of understanding why they feel this way. Subsequently, they may not be able to regulate this particular emotion. It is a hard task for an athlete who is preoccupied with task irrelevant thoughts to identify, express, understand, regulate, or use emotions in others.

Mindfulness can be defined as moment to moment awareness that arises “through paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 2013, p. xxvii). In other words, mindfulness means

perceiving everything the way it is in every moment without interpretation. Often one is so preoccupied with one's own thoughts that there is no room for anything that is actually happening. Mindfulness keeps one's awareness on the task at hand, notices when the mind wanders, and brings it back to focus again. This can be used in many sporting contexts and can already be trained in children. A coach might start with simple exercises during training, maybe as a routine at the beginning and/or the end, or as a recovery break. An example of this is described by Daniel Goleman (1995), where the children lay down on their back for a couple of minutes, place a ball on their belly, and watch it move up and down with their breath. Whenever they notice their mind wandering, they bring their attention back to their breath. More experienced athletes could use the same technique, focusing on their breathing during jogging, swimming, riding a bike, or performing a closed skill (e.g., a basketball free throw).

Success criteria: The important part of this exercise is not to try and avoid thinking at all but to be aware and notice whenever the mind starts to wander. A wandering mind is whenever irrelevant thoughts “pop up,” and the athlete needs to be able to bring the focus of attention back to the specific aspect of emphasis. Examples of foci could be one's breath, the action of planting, the right foot on the ground while jogging, or the movement of the left arm during front crawl. If an athlete is able to do this, even if it is only for a couple of seconds at a time, the activity can be considered a success. This then leads to a further goal to increase the length of this mindfulness time for the next attempt.

Activity 5: Body Scan

- Trained EI dimension(s): Identification (self)
- Type of sports: Individual and team
- Suited for: Athletes >10 years old

Goal of the activity: This activity aims to increase one's ability to sense any signals sent by one's body and to improve one's self-awareness. Practicing sensing bodily signals in a relaxed environment makes it easier to be aware of them in more demanding and stressful situations. This, in turn, makes it easier to identify, regulate, and use emotions inside oneself. For example, if an athlete is able to sense that his heart rate and his muscle tone increase because an opponent insulted him, he might identify his present state as anger and can subsequently implement relaxation techniques, to lower his muscle tone and heart rate and avoid any kind of irritated reaction.

Description: The body scan meditation is used in the program of the stress reduction clinic at the medical Center of the University of Massachusetts (Kabat-Zinn, 2013). It is a great way to recover and cool down after an intensive training or exhausting competition or to relax before an event. It is also a chance to improve one's body perception. The following script (Kabat-Zinn, 2013) can be used as a guide on how to execute the body scan²:

²Alternatively, a video by John Kabat-Zinn can be found on YouTube, in which the listener is lead through the meditation.

Lie down on your back in a comfortable place, such as your bed, the floor, a foam mat or pad. Ensure that you are in a warm, protected place where you won't be interrupted, while feeling safe and secure. To begin, gently close your eyes. If you start falling asleep feel free to open your eyes and continue with them open. Now bring your attention to the movement of your breathing. Let your attention settle on your abdomen, feeling the rising and falling of your belly with each in-breath and each out-breath. Take a few moments to feel your body as a whole, from head to toe, the sensations associated with the contact of the floor or bed. Next, bring your attention to your left foot and toes. As you direct your attention to them, see if you can direct your breathing to them as well, so that it feels as if you are breathing into your toes and out from your toes. It may help to imagine your breath traveling down the body from your nose into the lungs and continuing through the torso and down the left leg all the way to the toes, and then back again and out through your nose. Allow yourself to feel all sensations from your toes. If you don't feel anything at the moment, that is fine too. Just allow yourself to feel "not feeling anything." If you feel ready, "leave" the toes and move on to the sole of the foot, the heel, the top of the foot, and the ankle, continuing to breathe in to and out from each region as you observe the sensations that you are experiencing, and then "letting go" of that region and moving on. In this way, as described, continue moving slowly up your left leg and through the rest of your body (right leg, back, chest, arms, head, face, etc.). As you maintain the focus on the breath and on the sensation within the individual regions as you come to them, breathe with them, and let go of them.

Success criteria: This activity is successfully implemented when the athlete reaches a deeply relaxed state and focuses completely with full awareness on the particular body part he/she is "scanning."

Activity 6: Emotion Odyssey

- Trained EI dimension(s): Identification (other)
- Type of sports: Individual and team
- Suited for: Any age group

Goal of the activity: This activity aims to introduce different emotions to help enable the children to identify what it looks like when other people feel a certain way and what that particular emotion is called.

Description: This activity is inspired by the different emotion recognition training protocols (e.g., Elfenbein, 2006; Williams et al., 2012). This exercise is a great way to prepare the players (especially when they are young children) for Activity 7; hence it is explained for children. The children jog around a set area, and in every corner is a card with a picture of an emotion – either facial expression (see Figs. 11.4a–f) or body language (see Figs. 11.6a–f). Whenever the coach shouts the emotion, the children run toward the particular corner (see Fig. 11.7).

Success criteria: The activity is a success when the children are able to identify the emotions correctly, that is, if the coach says "anger," they run to the picture of an angry person. Furthermore, they should be able to judge the emotion in the picture and decide whether the feeling is positive or negative.

Possible variations (to extend to different age groups):

- Switch the cards around so the children always need to scan and recognize the particular emotion.
- Switch the pictures of the same emotion (facial expression vs. body language).



(a)



(b)



(c)



(d)



(e)



(f)

Fig. 11.6 Cards with emotions expressed through body language. (a) Fear; (b) Happiness; (c) Anger; (d) Sadness; (e) Surprise; (f) Disgust

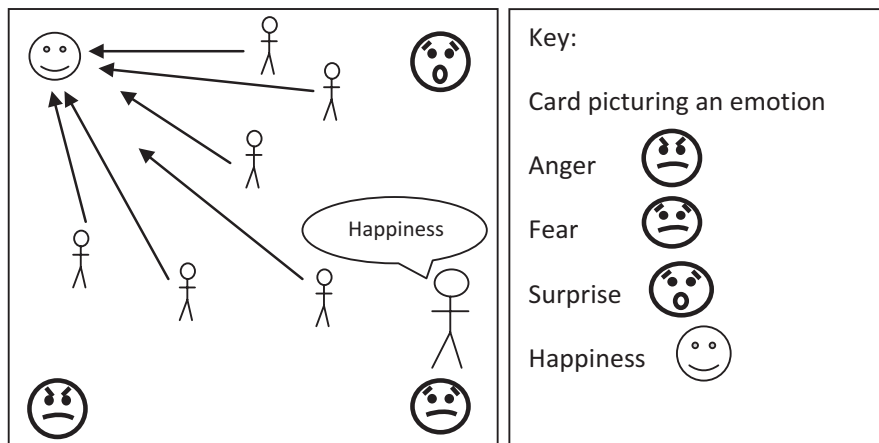


Fig. 11.7 Activity 6: Emotion Odyssey

- Add further pictures of emotions on the sides of the area.
- Do not shout the emotion but hold up a picture of it. This is advantageous especially if the children have to maintain another task such as dribble a ball. On the one hand, it is very loud, and they might not even hear the coach; on the other hand, they must learn to control the ball without keeping their eyes on it.
- Have each child pick a partner and tell each other a story about the particular emotion. “When did you last feel this way?,” “What made you feel this way?,” “How did you change the way you feel?” (if it’s a negative feeling), “What could you do to feel this way more often?,” (if it’s a positive feeling) “How could you use this?,” etc.

Activity 7: Emotion Memory

- Trained EI dimension(s): Identification (other) and expression (self)
- Type of sports: Individual and team
- Suited for: Any age group

Goal of the activity: The aim of this activity is to increase the player’s ability to identify emotions – also under pressure – by looking at the body language or the facial expression. Additionally, one of the variations targets their ability to express emotions effectively.

Description: This activity was inspired by a part of the EI training that was used in a sport context by Campo et al. (2016). The players are divided into two teams and stand in the center of the area. In each corner are cards put upside down (see Fig. 11.8). These cards picture emotions (a) in written form, (b) as facial expression (see Figs. 11.4a–f), and (c) expressed through body language (see Figs. 11.6a–f). The coach then tells the teams which emotions to look for, and the players perform a relay in order to find the three cards of that particular emotion and return them to the center. For example, player A starts, runs toward one of the corners, picks a card,

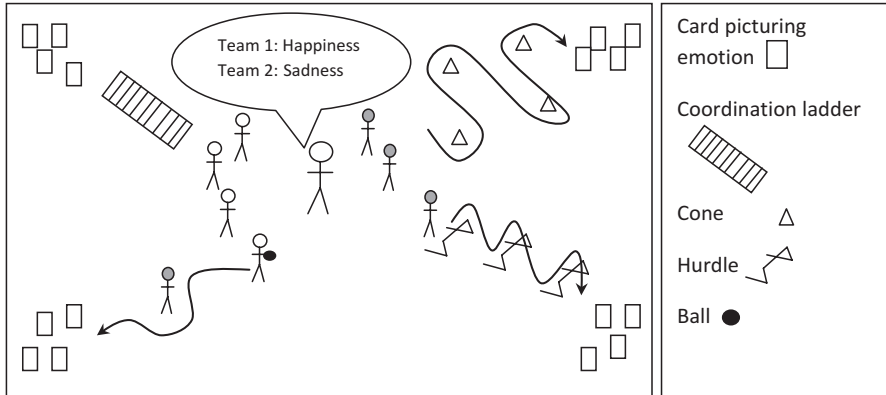


Fig. 11.8 Activity 7: Emotion Memory

and takes it with him/her if it is one of the emotions; the team is instructed to collect or turn it back over if it is not. He/she returns to the teammates and gives player B a high five who is then allowed to run. The team that collects the most correct emotions wins; thus, it is important to prepare an uneven amount of emotion pairs. While team 1 might still search for the facial expression of happiness, team 2 is already looking for the three cards of the second emotion. Depending on the variation, this activity can be used as an exercise on its own or integrated as part of the warm-up.

Success criteria: The activity is successful when the players are able to identify the emotions correctly, for example, they don't collect a happiness card when their task is to look for the anger cards. A further success criterion for one of the variations is the player's ability to express the particular emotion so that the others are able to identify it correctly.

Possible variations:

- Add more/different emotions.
- Have the players perform tasks on their way to the cards and/or back to the team, e.g., acting out the emotion on the card they turned around; the rest of the team has to guess the emotion.
- Any kind of game-specific physical tasks, such as coordination, strength, or technical exercises. Different obstacles could be introduced on the way to the different corners to enforce different movement patterns (e.g., (1) coordination ladder, (2) cones to perform angular sprints, (3) hurdles, (4) one-on-one battle against a player of the opposite team – only if the player gets past him, is he allowed to take a card).
- Game-specific exercises for injury prevention.
- Both players run toward the same corner, but only the one who arrives first gets to turn a card over.

Activity 8: Impulse Control

- Trained EI dimension(s): Regulation (self and others)
- Type of sports: Individual and team
- Suited for: Any age group

Goal of the activity: The goal of this activity is for the athletes to be able to effectively regulate their emotions using the traffic light system.

Description: The basis of this exercise, adapted from Daniel Goleman's (1995) book *Emotional Intelligence*, is a traffic light system. It is designed to improve a child's ability to deal with situations in which he/she feels angry, frustrated, or treated unfairly. Especially in team sports like soccer, there may be many such situations in almost every match. Therefore, not being able to regulate one's emotions can easily lead to a decrease in performance due to a dispute with teammates or, in the worst case, being sent off the pitch. Below are the instructions for each traffic light signal (Goleman, 1995, p. 317):

- Red light: Stop, calm down, and think before you act.
- Yellow light: Say the problem and how you feel, set a positive goal, think of solutions, and think ahead about the consequences.
- Green light: Go ahead and try the best plan.

In this exercise, coaches might be well advised to follow the tripartite model of EI. At first, the technique is introduced to build the knowledge level. It is best to show a picture of a traffic light, so the athlete immediately has an image they can link to the technique and each of the three steps. To test whether or not the children really understood the steps and to build their ability to follow them, organizing a role play is recommended, because it is much easier for the coach to intervene in the process if necessary. Furthermore, during the role play, the children's focus is only on this technique, which makes it easier for them to learn it. Once they understand the three steps, it is time to test their ability to use the technique in the training setting (i.e., during any kind of competitive game). For example, dividing the children into two teams and giving them the task to perform ten passes without losing the ball typically provides more than enough opportunities to practice this emotion-regulating technique. Whenever a child successfully implements one or even all of the three steps, be it after their own mistake, the mistake or negative comment of a teammate, or a disagreement with an opponent, the child should be praised and encouraged to keep practicing the technique. Finally, once the children are used to the technique and can perform it at the trait level, they will be able to recognize when they get a red light. Subsequently, they will automatically start the process through the step of yellow light to find a solution until they reach the green light to implement it.

Success criteria: This exercise is a success when the athletes are able to calm themselves down in frustrating situations instead of exploding in anger. In the best case, athletes are able to control themselves automatically, although this takes time and practice. A success in team sports would be when an athlete is able to use the

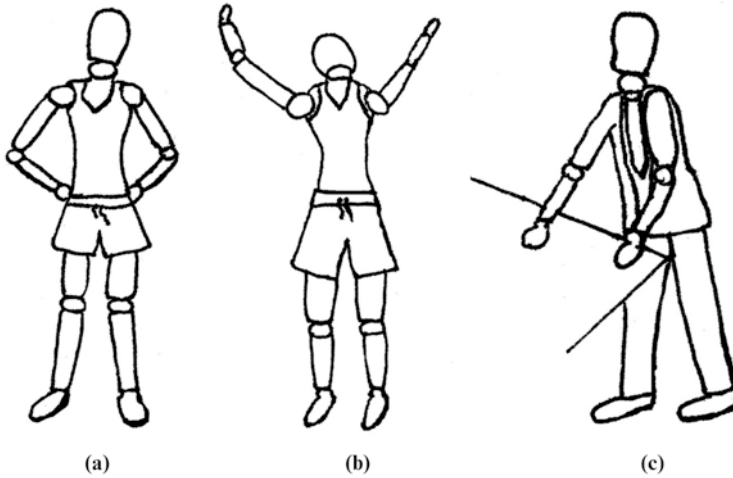


Fig. 11.9 Activity 9: Power Poses. (a) Power pose 1; (b) Power pose 2; (c) Power pose 3

technique on a teammate by (verbally or physically) stopping him/her from behaving irrationally and considering various options to help him/her to select the best one.

Activity 9: Power Poses

- Trained EI dimension(s): Regulation (self)
- Type of sports: Individual and team
- Suited for: Any age group

Background: Our body language affects our physiology as well as our performance. Carney, Cuddy, and Yap (2010) found that performing high-power poses for 2 min (see Figs. 11.9a–c) led to increased testosterone and decreased cortisol levels. They also found it increased tolerance of risk and feelings of power when compared to low-power poses which are characterized by a more closed body position. Additionally, Cuddy, Wilmuth, Yap, and Carney (2015) found high-power posing before an interview helped to increase interview performance, in comparison to low-power posing. This was solely due to different nonverbal behavior during the interview. Furthermore, they found that the high-power posers not only projected more confidence but also seemed to better maintain their composure than the low-power posers did. In the sport context, the capability to hide one's fear or excitement and express confidence and self-assurance in high-pressure situations is critical. Much like Djokovic did when Federer had two match points during the semifinals of the 2011 US Open, where Djokovic was able to remain calm in highly stressful situations. Zinedine Zidane's foul against Materazzi during the finals of the 2006 World Championship would be an example for the latter proposition. These results have yet to be validated in the sport context; however, power posing is a technique that is already used successfully by sport psychologists working with athletes.

In application, power posing can be integrated to the warm-up as a routine, either openly on the field or privately in the locker room. It could also be performed whenever there is a break in play and in stressful situations, like preparing for a penalty kick.

Goal of the activity: The goal of the activity is on the one hand to introduce and practice different high-power poses; best practice would be when the athletes perform them automatically during the match. On the other hand, athletes are made aware of low-power poses and encouraged to change their body language.

Description: The group is divided into two teams and instructed to achieve ten passes in a row without losing possession of the ball. When a player does not have the ball, he/she should adopt a high-power pose, and the pass only counts if the player receives the ball while doing a high-power pose. The team gets a point if the players achieve ten passes. After the ten passes, the players have to perform a celebratory behavior such as lifting a player on their shoulders. The game ends after a specific duration or after a set number of points. In addition, during the game the athletes are instructed to perform a high-power pose whenever the game is interrupted (e.g., because the ball is out of play or the coach gives tactical instructions). Close attention needs to be paid to how they behave after making a mistake. If the players are in a low-power pose, they should change into a high-power pose. If a player remains in a low-power pose for more than 5 s, the team loses a point.

Success criteria: The exercise is considered successful when the athletes are aware of the high- and low-power poses and the differences between them. In addition, they should be able to recognize if they are in a low-power pose and change their body language to a high-power pose.

Activity 10: Debriefing Sheet

- Trained EI dimension(s): Understanding (self)
- Type of sports: Individual and team
- Suited for: Any age group

Goal of the activity: The goal of the debriefing sheet is to encourage the athlete to reflect on particular situations that happen during a competition or training session. Reflections may include how they handled a situation, the emotions the athlete felt in that specific moment, and most importantly, why he/she felt that way. The idea is that the athlete must learn to recognize helpful emotions and effective coping strategies, deal with hindering emotions, and highlight ineffective coping strategies.

Description: This activity is based on the need to become aware of the interplay between stress, emotions, and coping, in order to make the process more effective (Hanin, 2000; Laborde, Raab, & Dosseville, 2013; Lazarus, 2000). After the competition, the athletes mentally reflect on their performance and complete their debriefing sheet (see Table 11.3). They should list what happened, which emotion(s) they experienced, how intense these emotions were, how much control they had, whether the emotions were helpful or harmful, which coping strategy they used, and how effective this strategy was. Using this debriefing sheet, the athletes can increase

Table 11.3 Activity 10: Debriefing Sheet

(1) Event/ potential stressor	(2) Emotion intensity	(3) Perceived control over the situation	(4) Emotions labeling	(5) Emotion functionality: helpful (+) or hindering (-) for performance (impact on decisions)	(6) Coping strategy	(7) Coping efficacy
	1 2 3 4 5	1 2 3 4 5				1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5				1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5				1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5				1 2 3 4 5
	1 2 3 4 5	1 2 3 4 5				1 2 3 4 5

Note: Instructions: The anchors of the Likert scales go from 1 (not at all) to 5 (very much). (1) Write down the event/stressor you encountered during the game. (2) Indicate the emotional intensity felt in regard to the stressor. (3) Indicate the degree of the perceived control you felt to have over the situation. (4) Label the emotion felt and potentially the thoughts associated with this emotion. (5) Indicate whether the emotion was helpful or hindering for the performance, with a + or a -. (6) Indicate the coping strategy you used to face the situation (e.g., focusing on the task, breathing deeply, shouting). (7) Judge the effectiveness of this coping strategy in addressing the stressor

their awareness of which coping strategies work for them according to specific situations. In the case the athletes find themselves overwhelmed by harmful emotions and ineffective coping strategies; the debriefing sheet should act as a cue to find an alternative way to deal and react to the stressor.

Another use of the debriefing sheet might be to form an action plan for how to react in the future when a similar situation occurs. This forward planning helps to reinforce positive coping behaviors and allows for coping development.

Success criteria: The success of this activity depends on the athletes’ capability to identify and express their emotions, as well as their awareness in the respective situation. They must be able to identify which emotions they experienced and to be able to express these emotions in words and write them down.

Activity 11: One-Shot Training

- Trained EI dimension(s): Regulating (self) and using (self)
- Type of sports: Individual and team
- Suited for: Advanced athletes

Goal of the activity: The goal of this activity is to simulate the pressure of a situation of a real competition within a training session. This is to recreate the impulsive feelings that usually only occur in competitions, because if something does not work in training, the athletes usually can try again without any consequences (Eberspächer, 2012). Given there is only “one shot,” the athletes have to handle the different emotions that accompany their own expectations, potential pressure the coach puts on them, and the consequences for their teammates. In addition to the emotions, they deal with prior to the task; they subsequently have to live with the result and all the emotions going along with that.

Description. Based on Eberspächer (2012), as the name implies, the athletes are only given one chance to succeed. If they fail, they cannot try again during the same training session. To be able to implement this activity, the athletes must be able to perform the required technique successfully (e.g., a handstand). For example, it makes no sense to give an athlete one chance to perform a handstand on the beam if he/she still struggles to perform a handstand on the floor. The instructions for the activity are as follows:

1. The coach (or the athlete himself/herself in case the athlete trains without a coach) determines when the athlete has to perform the respective task. That the point of time is not determined by the athlete himself/herself, but by someone else, is an important aspect of the one-shot training, because this directly reflects the nature of competition.
2. The athlete then has to mentally prepare for their one-shot attempt and cope with the emotions emerging as the event draws closer.
3. The athlete is then given one chance to perform the task and check whether the output matches the goal set by himself/herself or by the coach.
4. The athlete has to handle the emotional consequences following success or failure. Depending on the time in the training session, the consequences can vary:
 - If the one-shot task is at the end of the training, the athlete has to live with the emotional consequences until the next training session.
 - It is also possible to make the end of the training dependent on the athlete's success. For example, the training ends immediately in case of failure.
 - Another variant could be to establish some kind of punishment, either individual or collective. Individual punishment would mean the athlete has to perform additional physical tasks if they fail (e.g., push-ups or shuttle runs). Collective-inclusive punishment would mean that if the athlete fails, the whole team is punished, including the athlete. Collective-exclusive punishment would mean that the whole team, except the responsible athlete, will be punished. Different forms of punishment should add pressure when performing the one-shot task, forcing the athlete to deal with emotions they usually encounter during competition.

Finally, we suggest that the athlete could reflect on the experience using the debriefing sheet from Activity 10.

Success criteria: Succeeding at the one-shot task. If the athlete fails, they have to effectively cope with the emotions experienced until the next training session.

Possible variation: Instead of telling the athlete about his upcoming challenge immediately in advance, that is, the athlete has about 30 s to prepare, the announcement can be made 10, 20, or 30 min prior to the performance. It seems the longer the period of time until the performance, the harder it is to perform successfully, given the more time the athlete has to deal with the anticipatory emotions associated with the upcoming one-shot task.

Activity 12: Emotions in Music

- Trained EI dimension(s): Regulating (self)
- Type of sports: Individual and team

- Suited for: Any age group

Goal of the activity: The goal of this activity is for an athlete is to adjust movements according to the type of music which will influence their emotional state.

Description: This activity is based on the effects of music on emotions, particularly in the sporting context (Karageorghis & Priest, 2012a, 2012b). An opportunity to implement this activity is during the warm-up. The coach instructs the athletes to move in a certain way (e.g., high knees, jumping, swinging one or both arms, etc.) in accordance to the type of music (i.e., fast and arousing or slow and relaxing). The task for the athletes is to perform the different movements fitting to the style of music. At the same time, athletes have to be aware of how movement changes affect their emotions. The athlete can then implement this technique to regulate emotions depending on the particular requirements of a competition.

Success criteria: This activity is successful if the athlete is able to move in accordance with the music (i.e., performing slow moves with slow music and fast moves with fast music).

Activity 13: Positive Body Feedback

- Trained EI dimension(s): Regulating (other) and using (other)
- Type of sports: Individual and team
- Suited for: Any age group

Goal of the activity: This activity aims to increase the athletes' ability to influence their teammates' emotional state through a simple gestural praise. This also aims to influence their teammates' ability to use emotions to improve reflections, decisions, and actions. The idea behind this activity is to reinforce positive behavior through gestural praise and to use the emotions triggered in others to foster learning, self-confidence, motivation, and feelings of social support.

Description: This activity is inspired by Morris and Zentall (2014), who showed that gestural praise, such as high five, is more motivational than verbal praise. It can be included in any kind of exercise within a training session. Whenever a teammate performs successfully, his/her teammates reward them through physical gestures (e.g., a thumbs-up, a high five, or hugging). Automatizing this gestural praise behavior may help create a more positive global emotional climate within the team.

Success criteria: This activity is a success when the coach notices that the athletes systematically praise each other after every achievement defined within the sporting activity.

Conclusion

In this chapter, we presented an overview of the emerging area of research and application on role EI plays in sports and physical activity. Going beyond the influence of EI on sport performance and on adherence to physical activity, we offer a range of activities aimed at increasing EI through sport participation. These target

the five main dimensions as identified by the PEC: identification, expression, understanding, regulating, and using emotions. Considering each of these dimensions in relation to the self and others, we endeavored to inspire researchers and practitioners to integrate sport and physical activity to develop EI, considering different age and expertise target groups, in order to broaden the positive impact of EI training in our society.

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Chapter 12

Scaling Up High-Quality Social-Emotional and Character Development in All Schools: A Set of Policy Recommendations to the US Secretary of Education



Maurice J. Elias, Samuel J. Nayman, and Joan C. Duffell

Abstract In this chapter, we make the case and propose policy recommendations to the US Secretary of Education, as well as state commissioners of education and other educational leaders, on how to effectively scale up high-quality social-emotional and character development (SECD) in all schools. First, we define SECD, social-emotional learning (SEL), and related competencies, identify effective approaches to developing these competencies through universal school-based programming, and summarize the known individual, social, and economic benefits of systematic efforts to promote these competencies in schools. Next, we review the current state of US education policy with regard to SEL and SECD, including the scope of program implementation, state standards, preservice and in-service teacher development, evaluation and assessment, and funding. We end the chapter with a set of policy recommendations on how to leverage existing strengths and build further capacity for making SECD an integral and seamless component of the education system.

Jeff Bezos, the founder and CEO of Amazon, is famous for including an empty seat at his meetings. The empty seat represents Amazon's customers. The seat is a reminder to always keep Amazon's customers in mind when making decisions. Not surprisingly, Amazon is consistently ranked the number one company in customer satisfaction across multiple rating agencies. The bottom line is that getting a "seat at the table" is the first step to being heard and served. Similar to Amazon's customers, the authors of this chapter are interested in making sure students' social

M. J. Elias (✉)
Rutgers University, Piscataway, NJ, USA
e-mail: rutgersmje@aol.com

S. J. Nayman
Rutgers University-New Brunswick, New Brunswick, NJ, USA

J. C. Duffell
Committee for Children, Seattle, WA, USA
e-mail: jduffell@cfchildren.org

and emotional needs are acknowledged and addressed at the federal and state education policy tables.

Jeff Bezos is not alone in his vision of the future:

Some employers already recognize the benefits of social and emotional skills in the 21st-century workplace – including global internet giant Google. After examining employee surveys and performance reviews, Google found that its most effective managers were good coaches, took an active interest in their employees' lives and were skilled at listening to and sharing information.... The résumés of successful candidates will need to include social and emotional proficiency. (World Economic Forum, 2016, p. 6)

Further, it is equally clear that college admission and completion, particularly for disadvantaged, minority students, depends as much on so-called “noncognitive” abilities as on traditional cognitive skills (Savitz-Romer & Bouffard, 2013). If indeed social and emotional proficiency – or emotional intelligence, as it is also called – is so essential for college and career success, we must expect it to be incorporated into our education system systematically.

Therefore, we take as our audience current and future Secretaries of Education of the United States (as well as commissioners of Departments of Education in all US states and territories), and we propose and address an urgent question that educational leaders should be asking: *How can we effectively scale up high-quality social-emotional and character development in all schools?*

To address this question, we will cover the following: What is social-emotional and character development (and its popular equivalents, social-emotional learning, character education, and emotional intelligence, among others), and why should schools be concerned with this? What do we know are the benefits of systematic efforts to promote these competencies? What are demonstrably effective approaches to doing so? What is the current state of educational policy in this area? And what policy recommendations do we have for the Secretary of Education as well as state commissioners of education and others concerned with educational policy?

What Is Social-Emotional and Character Development and Why Should It Be a Concern of Schools?

As noted earlier, social and emotional proficiencies are referred to by many names, including emotional intelligence (Goleman, 1995), noncognitive or “soft” skills (Farrington et al., 2012), life skills (Macmillan Education, 2016), moral and performance character (Lickona & Davidson, 2005), virtues (Peterson & Seligman, 2004), twenty-first-century skills (Partnership for 21st Century Skills, 2010), resilience (Prince-Embury, Keefer, & Saklofske, 2016), positive youth development (Snyder & Flay, 2012), prosocial skills (Brown, Corrigan, & Higgins-D’Alessandro, 2012), and college and career readiness skills (American Institutes for Research, 2017a) – and the list is not exhaustive. While this can be confusing to educators and policy makers, it also suggests a nearly universal concern with fostering the basis of successful social interaction across a wide range of contexts. Since one of the most

important contexts in which children spend a significant amount of time is school, then it stands to reason that schools are a necessary arena for encouraging social and emotional proficiency – if only to help schools succeed in their academic mission.

The most common definition of social and emotional learning (SEL) is by the Collaborative for Academic, Social, and Emotional Learning (CASEL; www.CASEL.org), the US nation's leading organization advancing the development of academic, social, and emotional competence for all students: "SEL involves fostering social and emotional competencies through explicit instruction and through student-centered learning approaches that help students engage in the learning process and develop analytical, communication, and collaborative skills" (Weissberg, Durlak, Domitrovich, & Gullotta, 2015, p. 6). Beyond this definition, CASEL identifies five competencies associated with SEL, including:

1. *Self-awareness*: The ability to accurately recognize one's emotions and thoughts and their influence on behavior. This includes accurately assessing one's strengths and limitations and possessing a well-grounded sense of confidence and optimism.
2. *Self-management*: The ability to regulate one's emotions, thoughts, and behaviors effectively in different situations. This includes managing stress, controlling impulses, motivating oneself, and setting and working toward achieving personal and academic goals.
3. *Social awareness*: The ability to take the perspective of and empathize with others from diverse backgrounds and cultures, to understand social and ethical norms for behavior, and to recognize family, school, and community resources and supports.
4. *Relationship skills*: The ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. This includes communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively, and seeking and offering help when needed.
5. *Responsible decision-making*: The ability to make constructive and respectful choices about personal behavior and social interactions based on consideration of ethical standards, safety concerns, social norms, the realistic evaluation of consequences of various actions, and the well-being of self and others.

While CASEL's definition is perhaps most widely used, it both benefits from and is supplemented by the work of child development researchers. For example, Saarni (2007) has identified eight areas of emotional competence: awareness of one's emotional state, understanding the emotions of others, use of an emotion lexicon, capacity for empathy and sympathy, management of emotional expressiveness, effective emotion regulation and adaptive coping, awareness of the structure or nature of relationships, and capacity for emotional self-efficacy. James Comer outlines a comprehensive set of developmental pathways with which social and emotional competencies are intertwined: physical, cognitive, language, psychological-emotional, social-interpersonal, and ethical (Comer, Haynes, Joyner, & Ben-Avie, 1999).

The inclusion of an “ethical” pathway is not unique. Lerner and colleagues’ (2005) “five Cs” of positive youth development include competence, confidence, connection, character, and caring, as well as a sixth “C,” compassion (Snyder & Flay, 2012). Others place greater focus on particular moral values and virtues, such as integrity, respect, kindness, cooperation, and forgiveness (Lickona & Davidson, 2005; Nucci, Narvaez, & Krettenauer, 2014). Regardless, there is strong agreement that social and emotional proficiencies are an engine for accomplishment in many realms of life, and that a constructive guidance mechanism is necessary to steer them in positive directions.

We have defined the combined perspective as social-emotional and character development (SECD), complementary to the introduction of moral and performance character (Lickona & Davidson, 2005), articulating the position that positive life outcomes require a combination of prosocial values and the competencies and dispositions to enact those values (Elias, 2009; Elias & Berkowitz, 2016).

The evidence in support of SECD has gone beyond those catalogued in education-oriented compilations (Brown et al., 2012; Nucci et al., 2014; Weissberg et al., 2015). James Heckman, a Nobel Prize winner in economics who has studied the impact that people’s cognitive and soft skills can have on economic, health, and social outcomes, notes that cognitive skills account for only a portion of students and adults’ academic, career, and social success (Heckman & Kautz, 2012; Heckman, Stixrud, & Urzua, 2006).

Nor is evidence confined to the United States. As we enter an increasingly complex and globalized society, information and communication skills, teamwork, project management and coordination, delay of gratification, and responsible, careful analysis and checking will become correspondingly valued. For the United States to sustain a position of economic leadership, we will have to attend to the social and emotional competencies and character needed to function well – and to flourish – in this changing world. Some would say that our failure to grasp this, and instead focus on the dynamics of standardized test performance, is responsible for our loss of international stature in both economics and education. The future is foreshadowed in a report by the World Economic Forum (2016):

A recent longitudinal analysis by the Organization for Economic Co-operation and Development (OECD) across nine countries showed that having a balanced set of cognitive and social and emotional skills is crucial for children to better face the challenges of the 21st century; social and emotional skills in particular play an important role in improving children’s chances of lifetime success. (p. 6)

While it is clear that SECD is necessary for educational and vocational attainment, there is also evidence that a paucity of these abilities is harmful. Indeed, across a number of studies, deficits in these skills contribute to increased criminal behavior, school dropout, substance abuse, and stunted financial earnings (Moffitt et al., 2011; see also Chap. 9 by Espelage, King, & Colbert, this volume). That the prevalence of these outcomes is not distributed equitably across ethnic and socio-economic groups is an added cause for concern. Children are born into communities they did not choose. When they do not receive the requisite resources, education, and support to lead successful and fulfilling lives, our entire society suffers. Building SECD is a key element in leveling the playing field.

Self-control, which serves as an “umbrella construct” (Moffitt et al., 2011) for many of the social, emotional, and character skills, has been extensively studied in several widely cited longitudinal studies and is predictive of many life outcomes (Moffitt et al., 2011; Shoda, Mischel, & Peake, 1990). These studies have demonstrated that self-control plays an outsized role in people’s productivity, health, and wealth. A study that examined a city’s entire birth cohort of 1037 children from birth to the age of 32 showed that lower self-control predicted adult health problems, substance abuse, financial problems, and criminal behavior, even when accounting for IQ, social class, and the “snares” of unplanned pregnancies and school dropout, whereas higher self-control reduced these costly outcomes (Moffitt et al., 2011). A similar analysis can be provided for every one of the five CASEL skills areas, as well as those additional competencies identified by other researchers (e.g., Chap. 6 by Denham & Bassett, this volume).

A society that systematically ignores the importance of social, emotional, and character development is a society that should brace itself for a bleak future. The vision for this future includes desperate criminal activity, unplanned pregnancies by teenagers who are unprepared to care for their children, individuals burdened by debt and credit issues largely because of poorly informed decisions, and needlessly large segments of the population plagued by mental and physical health problems. Not only will individual citizens have to bear the weight of these issues, but the larger society will also suffer morally, relationally, and financially (Belfield et al., 2015; Heckman & Kautz, 2012).

What Are the Known Benefits of Systematic Efforts to Promote SECD Competencies?

More than predicting important life outcomes, social, emotional, and character development can be influenced through instruction and providing nurturing environments. With regard to the latter, there are a variety of SECD programs focused on cultivating these skills that have demonstrated positive results. A landmark meta-analysis of 213 school-based SEL programs that included close to 300,000 primary and secondary school students revealed some of the many benefits of SEL programming (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Most notably, SEL programs contributed to gains in academic performance, SEL skills, prosocial behaviors, and attitudes toward self and others (e.g., self-esteem, bonding to school), as well as reductions in conduct problems and emotional distress (e.g., anxiety, depression) (Durlak et al., 2011). Furthermore, the effects on academic performance and emotional well-being were amplified when implementation quality was high and multiyear. A parallel analysis of programs focusing on character development has also shown that high-quality, systematic, and continuous instruction produces positive outcomes (Berkowitz & Bier, 2006).

James Heckman’s work compliments these meta-analyses with evaluations of comprehensive early childhood education programs designed to create environments that would promote development along all of the pathways specified by

Comer, including social-emotional. Heckman and colleagues (Heckman & Kautz, 2014; Heckman, Pinto, & Savelyev, 2013) have conducted extensive analyses on the short- and long-term costs and benefits of numerous early childhood- and adolescent-targeted programs. Longer-term data on early childhood interventions (Heckman et al., 2013) help shed light on both societal benefits and critical life outcomes, such as criminal activity, drug use, financial earnings, and health, that a shorter-term evaluation would not capture.

Two widely recognized childhood interventions evaluated by Heckman and Kautz (2014) include the Perry Preschool program and the Abecedarian (ABC) program. The Perry program was a 2-year program that included home visits by teachers and a curriculum that targeted cognitive as well as social and emotional skills. ABC targeted similar skills in children from 6 weeks of age to third grade. These childhood interventions resulted in many benefits to the individuals and society, particularly in the categories of educational attainment, employment, and earnings, and reduced criminal activity (Heckman et al., 2013). The societal benefits of the Perry program alone resulted in a statistically significant rate of return of around 7–10% per annum for both boys and girls (Heckman et al., 2013). Other preschool programs targeting emotional competence development are reviewed in Chap. 6 by Denham and Bassett (this volume).

Beyond the preschool years, evidence has accumulated that the quality of environments in which individuals work has significant effects on their productivity, understanding, competence, health, and mental health (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). This cannot be a surprise, yet educational policy does not yet reflect the pervasive importance of establishing a supportive, safe, caring, inspiring, healthy, and appropriately challenging school culture and climate. While school climate assessment is mentioned in the Elementary and Secondary Education Act as desirable, systematic assessment and improvement of the climate has not yet been viewed as mandatory. Within teacher evaluation systems, such as that of Danielson (2013), Domain 2 focuses on classroom instructional climate; however, it is given less practical emphasis than Domains 1 (planning and preparation) and 3 (instruction) and is still framed at the individual teacher level, not incorporating the influence of the wider, overall school climate on what happens in classrooms.

[Character.org](http://character.org), formerly the Character Education Partnership, recognized that schools cannot be judged by their individual programs, however well researched and implemented, but rather must be considered for the way in which they promote SECD in every aspect of their structure and processes. They created a National Schools of Character recognition program, delineating 11 Principles by which such schools should be organized. For over two decades, [Character.org](http://character.org) has designated schools (and districts) of character and has encouraged these schools to network among themselves and nurture and mentor aspiring schools of character (<http://character.org/schools-of-character/>). From our perspective, SECD is a multilevel, ecological-developmental concept that includes specific efforts to build social and emotional competence, as well as creating an intentional culture and climate supportive of learning and positive character development (Elias &

Berkowitz, 2016). Therefore, much can be learned from the accumulated history of these designated schools of character that adds greatly to knowledge about implementation in context, which we address next.

What Are Demonstrably Effective, Replicable Approaches to Building Social-Emotional Competence and Character in Schools?

The Realities of Scaling SECD Programs

Scaling is a term that is often used in the business world to describe efforts to expand a business or product. While scaling businesses has become vastly easier and more visible in recent history due to the advent of the internet, e-commerce, and angel investors who provide the requisite financial resources, scaling an SECD program faces many of the same challenges that businesses and organizations faced prior to these developments. For an SECD program to produce measurable changes in students and to really take hold in a school, there are several areas to consider, stemming from the ecology and goals of each school setting. Considering the particularities of each school and the importance, relevance, and complexities of shifting school culture when it comes to successfully implementing an SECD program, there is no “one-size-fits-all” approach to scaling an SECD program, and therefore scaling is less straightforward than might be imagined. Peter Rossi (1978) has summarized the challenge by saying that SECD classroom-based interventions, which are by nature multiyear and require developmental coordination, are high in complexity and operator dependence. SECD programs have many moving parts and all depend on the proficiency of the implementer for their success. There can be no implementer-proof SECD program because the relationship with the implementer is part of the mechanism of program success. Clearly, when SECD interventions are school-wide, the challenges are multiplied exponentially.

Implementation Science

While it might seem easy to dismiss the need for implementation support, it is helpful to acknowledge that implementation can be complex. In fact, there is an entire science devoted to implementation, known as Implementation Science (Durlak, 2015). Implementation requires many components that go beyond simply communicating and disseminating ideas. Implementation also entails ensuring that districts are applying the programs with fidelity, assessing program outcomes, and taking steps to ensure program continuation (Rogers, 1995). SECD program implementation is particularly complicated given that shifting school culture and teaching new skills to people with unique learning styles and motivations require more

personalization, time, and energy than common business goals like developing an algorithm to change a feature on an iPhone app or finding ways to produce more candy bars.

Implementation Science is an essential consideration for effective policy around SECD. As one might expect, Implementation Science is nuanced. It involves structural and process features of SECD, the selection of the curricular/instructional core, and linkage to the wider school ecology, particularly academics and student support services. We will consider each of these below.

Structural and Process Features of SECD

Across a range of approaches mentioned earlier, ranging from character education to SEL to whole child education, a common set of activities, combining both structural and process features, have been identified consensually (Wangaard, Elias, & Fink, 2014):

1. Define and unify community around shared values.
2. Identify, teach, and practice social-emotional skills, especially those needed to demonstrate respectful behavior and facilitate thoughtful instruction in all academic areas.
3. Teach and practice ethical decision-making.
4. Create a safe, supportive, and caring learning community.
5. Engage students in relevant learning, leadership, and service.
6. Encourage all adults to be positive role models of focal skills and core values.
7. Require research-based professional development.
8. Incorporate inclusive feedback and evaluation that guide practice in a spirit of continuous improvement.
9. Engage parents and community.

Each of these nine areas denotes a set of process required for implementation success and which have to be responsive to changing circumstances, challenges, and resources. That is why the feedback and evaluation process must include diverse voices, including those of students. Parent engagement would be regarded as essential by some experts and as aspirational by others (Patrikakou & Weissberg, 2007). What is not debatable is that direct instruction of skills is needed and to accomplish this, systematic, multiyear, coordinated, and evidence-based approaches are the best starting points.

Evidence-Based Programs

There are numerous SECD programs for schools and districts to choose from, and the process of selecting an effective and appropriate SECD program can easily begin to feel daunting. However, before being swept away by the flood of

information, it is advisable to focus on those programs that are well researched and evidence-based to ensure that students will be exposed to programs that have been shown to work in at least some settings. A helpful starting point is to consult CASEL's SEL program guides for preschool and elementary school programs (CASEL, 2013) and middle and high school programs (CASEL, 2015). Programs can only be included in these guides if they meet the fairly rigorous evaluation criteria:

At least one carefully conducted evaluation that (a) includes a comparison group, (b) is based on pre- and post-test measurement, and (c) demonstrates a positive impact on a student behavioral outcome reflected by statistically significant main effects ($p < .05$) between the treatment and comparison groups when controlling for outcome pretest. Analytic methods must be described with sufficient clarity and not include any serious threats to validity. If a qualifying evaluation includes a program effect that favors the comparison group then the program is ineligible to be SElect. (CASEL, 2015, p. 11)

CASEL's SEL program guides will continue to be updated and will therefore continue to serve as an excellent reference point for schools, districts, and states that choose to integrate SEL into their curriculums.

Universal Programs

Most of the programs identified by CASEL are designed for delivery to entire school populations for multiple years. They are the equivalent of putting fluoride in the water supply – all students get SEL skill development, whether they have shown deficiencies or not. These “universal” SEL programs are also referred to as “Tier 1” programs, given to all participants in a given setting. When selecting an SEL program to scale, it is cost-effective and socially just to choose a universal program that helps students build transferrable skill sets that transcend particular contexts and apply to a variety of issues, reduces stigma by focusing on all students and not a subset of students, increases support by benefiting everyone, and minimizes costs of recruiting and retaining students by including all students in a school during the school day (Jones, Greenberg, & Crowley, 2015; Moffitt et al., 2011). Although a larger *percentage* of maladjusted children will likely benefit from an SEL (or any SECD) program than well-adjusted children, a larger *number* of well-adjusted children will “go on to have serious adjustment problems as adults” (Jones et al., 2015, p. 99), which would mean major cost savings to society if we take a preventive approach through universal programming.

Beyond the benefits to students, universal SECD programs are a sustainable option for school districts. Many schools are burdened with disparate programs that are uncoordinated, leading to confusion and a “jumbled schoolhouse” (Elias et al., 2015). Universal programs link all areas and subjects in a school, leading to greater alignment among teachers, administrators, and students (Elias et al., 1997). That said, explicit attention is often necessary to create carryover and continuity from SECD program elements to academic and special classes. Even something

as intuitive as using a common self-calming strategy across classes and school situations, based on the one taught in a universal program, is not common practice and requires specific attention, training, and monitoring.

As federal, state, and district mandates change, a universal program's focus on a broad set of skills, across all subject areas, allows it to remain agile, flexible, and adaptable. A universal program is less likely to be doomed to obsolescence and irrelevance (Elias et al., 1997). For an example of a scalable evidence-based SEL program, see the case study in Appendix A.

Universal programs are complemented with Tier 2 programs, which are targeted to particular at-risk populations or students showing early signs of not grasping the skills being taught in the universal, Tier 1 context (equivalent to getting cavities despite fluoride). For these children, supplemental SECD instruction can be delivered in the classroom or by student support professionals, ideally with interventions consistent with whatever Tier 1 approach is being used in a given setting. Again, as intuitive as this may seem, if special efforts are required to extend SECD skills and values across Tier 1 areas, even greater attention is required for synergistic integration of Tier 1 and Tier 2 components.

Tier 3 services are typically directed at students who have special education classifications (equivalent to conditions needing orthodontics or other longer-term, specialized treatment). They often have SECD remediation as part of their Individualized Educational Plans (IEPs); surprisingly, it is not typical for that SECD remediation to be coordinated with SECD approaches being delivered universally in Tier 1. This is an unfortunate shortcoming that should be attended to by educational leaders and policy makers. There are also specialized programs developed particularly for implementation in Tier 3 contexts. However, reviewing Tier 2 and 3 resources is beyond the scope of this chapter (see Adams, 2013; Cooper & Cefai, 2013; Elias, 2004; Elias, Friedlander, & Tobias, 2001).

What Is the Current State of the US Educational Policy with Regard to SECD?

Porter, Bothne, and Jason (2008) speak eloquently about the challenges of creating policy regarding phenomena of human behavior that are dynamic, are ecologically embedded, and sit at the intersection of biology, psychology, and morality. Regarding the latter in particular, Porter et al. note that people tend to see the world through a lens of either individualism and autonomy or relationship and community or, least often, some combination of the two. Educational policy, and policy around SECD in education, can lead to blurriness if not aligned with the lens through which the world is viewed. Most recently, we have been in a period of time during which No Child Left Behind has been an educational policy aligned with individualism and autonomy, while SECD is more aligned with relationship and community. If SECD has gotten traction, it is more likely due to SECD's moving more toward positions aligned with tailoring and adaptation, i.e., a bit more toward individualism. Even though the current version of the Elementary and Secondary Schools Reauthorization,

“Every Student Succeeds Act” (U.S. Department of Education, 2015), speaks about the importance of school culture and climate and social-emotional competencies, the continuing emphasis on academic accountability and annual standardized testing maintains a strong systems pressure to promote individual achievement. The attitude that academic accomplishment is mostly due to individual work and effort is a major obstacle to scaling up SECD in schools.

Porter et al. (2008) are quick to acknowledge that a perspective focused on dynamic systems processes and ecological interconnectedness does not favor prescriptive solutions to complex social problems, such as mandating a particular SECD approach to be scaled up in all schools nationwide or even state-wide. Ultimately, what must be scaled up is an understanding of the dynamic systems processes and structures that would allow for constant monitoring, adaptation, and coordination of efforts to promote SECD systematically in PreK-12 (and some would say, preK-16) educational systems, including after-school contexts (and, some would say, home contexts as well; Patrikakou & Weissberg, 2007).

Type and Extent of Programs Implemented Across the United States

The extent to which evidence-based SEL programs are being implemented in schools across America is unclear. There is no readily available scan of the landscape that the authors of this chapter have encountered while acknowledging that this is a steadily changing landscape and the lack of mapping is a recognized void that can and should be filled. In the United States, at least, educational policy is highly focused at the state level. Therefore, the most relevant candidates for compiling this information would be state-level education groups, ranging from a technical assistance team that state education agencies (SEAs) create (with the encouragement of the Secretary of Education) to the SEAs themselves. In a “From Practice to Policy” report, the National Association of State Boards of Education makes a similar suggestion for policy makers who want to know the extent to which SEL programming is being implemented in their state (Heller, 2013, p. 6):

Request that your state education agency (SEA) put together a full report on SEL in your state, including detailed information about existing resources and activities (everything from full-blown, holistic SEL initiatives to stand-alone programs focused on bullying prevention, mental health counseling, or other discrete issues). This should include performance data and information about each initiative’s evaluation plans. Further, the SEA should call attention to any newly launched school- or district-wide SEL initiatives in the region, and it should identify local experts in SEL, such as researchers based at nearby universities.

The National Association of State Boards of Education makes clear that SEAs are a viable candidate for compiling information on the location of SECD, nationwide. This information-gathering process will be invaluable for avoiding redundancies, finding gaps, and streamlining the introduction and improvement of SECD programming across each state and throughout the country.

SEL State Standards

Recognizing the need to focus on states, CASEL completed a scan of SEL preschool through high school standards across all 50 states in January of 2014 (Dusenbury & Weissberg, 2016). While there are undoubtedly changes that have occurred since 2014, CASEL's report provides a comprehensive overview of the landscape, which can and should be consistently updated and enhanced by each state's SEA.

The most essential aspects of high-quality state SEL standards are demonstrated by Illinois, Kansas, and Pennsylvania, which are the only three states to have "comprehensive sets of freestanding standards with developmental indicators for the entire K-12 range" (Dusenbury et al., 2015, p. 537). Other states only have elements of these characteristics. "Comprehensive" standards indicate that the standards address every SEL competency, including self-awareness, self-management, social awareness, relationship skills, and responsible decision-making, without neglecting any of those competencies. "Freestanding" SEL standards imply that standards stand alone, as opposed to only being embedded into existing standards. The benefit of freestanding standards is particularly apparent when compared to states that lack freestanding standards: "When SEL standards are spread across other subject areas, they may not be emphasized, and regular practice may not occur" (Dusenbury et al., 2015, p. 541).

Freestanding standards do not have to be adopted to the exclusion of the integration of academic and SEL standards. For instance, "45 states are in the process of adopting the [Common Core State Standards] CCSS in math and ELA, which contain standards on communication (especially speaking and listening), cooperation skills, and problem solving" (Dusenbury et al., 2015, p. 540). Note, however, that as of this writing, states are retreating from endorsement of CCSS, making any sense of an integrative national model quite tenuous.

"Developmental indicators" help to align the SEL standards with the developmental levels of students and help ensure appropriate instruction. CASEL (2017) maintains an up-to-date *State Scan Scorecard* containing each state's SEL standards for preschool and for kindergarten through high school. While there are separate resources for preschool and kindergarten through high school, CASEL suggests states integrate preschool and kindergarten through high school SEL standards. Illinois and Pennsylvania have already done this. The integration of preschool and kindergarten through high school standards would be a particularly helpful exercise considering 49 states already have high-quality freestanding preschool SEL standards, which can be used as a model for the kindergarten through high school standards (Dusenbury et al., 2015).

Informal SECD alliances

As of this writing, and perhaps as a reflection of the relative lack of attention to SECD at the federal and state levels, nongovernmental organizations within some states have developed more or less formal organizational alliances of groups

committed to bringing systematic, high-quality SECD into schools. Among these organizations are the Massachusetts Alliance for Social-Emotional Learning (www.sel4ma.org) and the New Jersey Alliance for Social, Emotional, and Character Development (www.njasecd.org), and similar entities are in various stages of development in Connecticut (ei.yale.edu), Colorado (www.randomactsofkindness.org), and Washington (www.facebook.com/SELforWA), and likely elsewhere, as of this writing. Further, some municipalities have made SECD a priority and have integrated it into policy and/or administrative organization (e.g., Anchorage, AK; Austin, TX; Atlanta, GA; St. Louis, MO; Sacramento, CA; New York, NY; Boston, MA; Morris, Sussex, Warren, and Hudson counties and New Brunswick, Lawrenceville, and Old Bridge, NJ). This is far from a comprehensive list but reflects in part the determination of SECD advocates to not be deterred by state and federal education systems now dominated by academic testing regimens.

Teacher Preparation and Development

Teacher preparation can be divided into preservice and in-service professional development, which, respectively, refer to training provided to unlicensed teachers in teacher education programs (Schonert-Reichl, Hanson-Peterson, & Hymel, 2015) and training provided to licensed professionals (Jennings & Frank, 2015). Given the situation with national and state standards, it would not be expected that teacher training would systematically reflect SECD. For example, one study examined the required curriculum content of several US elementary teacher education programs and found that 53% of the syllabi examined did not address students' social, emotional, and behavioral problems (State, Kern, Starosta, & Mukherjee, 2011). Another study examined the required curriculum content of 50 top-ranked US graduate teacher education programs and found that a quarter of the programs did not require any courses on either social development, emotional development, behavior management, or abuse/neglect (Vinnest, Keenan, & Green, 2014, as cited in Schonert-Reichl et al., 2015). The Social-Emotional Learning in Teacher Education (SEL-Ted) project, which provides an overview of kindergarten through high school preservice teacher certification requirements, indicates that only "one-third (33%) of states addressed all five SEL Competency of Student domains" and "*not one* state had standards that addressed all five core SEL Competency of Teacher domains" (Schonert-Reichl et al., 2015, p. 414), indicating that countless teachers are not explicitly taught the SEL competencies, like self-awareness and self-management, that are important to teach future students.

Effective preservice professional development (PD) for SECD consists of an education component, whereby teachers learn about social-emotional development and evidence-based practices, as well as an experiential component, in which teachers apply SECD content to their own lives and to their classrooms as student-teachers (Schonert-Reichl et al., 2015). The reality is that majority of teacher education programs do not address these critical SECD-related skills and content. The quality and extent of preservice teacher preparation varies by state and is determined primarily

by the respective state's teacher certification requirements, which are determined by state policy (Schonert-Reichl et al., 2015).

In-service PD would seem to be highly relevant and effective given that it can occur in applied settings. Effective in-service PD for SECD consists of "PD opportunities that are presented consistently over an extended period of time and involve active group participation and collaboration" rather than "the typical 'one-shot' workshop approach most teachers experience" (Jennings & Frank, 2015, p. 423). Coupling interactive and spaced training with opportunities to apply SECD knowledge to the classroom setting and to the teachers' own lives is a recipe for high-quality PD (Jennings & Frank, 2015). One example is Open Circle, an evidence-based SEL program that serves as an example of a model in-service PD. Open Circle begins with a 4-day interactive training, followed by coaching sessions throughout the year, along with workshops for teachers on self- and stress management (Jennings & Frank, 2015). Unfortunately, many in-service PDs do not take advantage of the real-time training ground that is the classroom and range widely in duration, content, and level of commitment (Jennings & Frank, 2015).

Future trends in SECD-related PD include opportunities that address teachers' own self-management, which influences teachers' classroom management and modeling of social and emotional skills. Many of these self-management programs emphasize mindfulness training as a way for teachers to reduce stress and manage their emotions (Jennings & Frank, 2015; see also Chap. 14 by Vesely-Maillefer & Saklofske, this volume). There is also a growing interest in using computer and web-based approaches. While there are cautions about the importance of interpersonal contact in training for SEL, technology enables such things as easier recording and sharing of classroom interactions, group and expert supervision outside of one's immediate setting, and remote expert coaching. Some SECD programs, such as Second Step, have transferred significant training and support to the web (Elias, 2013). In addition, two online certification programs, in School-Focused SECD Leadership and in SECD Instruction, exist and include both practica and virtual professional community supports (SELinSchools.org, sel.rutgers.edu). Technology also expands the reach and networking of SECD training. However, as of this writing, such efforts were still largely in their infancy.

Assessments

It is commonly held in the business world that "what gets measured, gets managed." This idea is just as relevant to SECD as it is to business. The importance of SECD assessment is that the very act of measurement encourages teachers and schools to pay attention to, manage, and improve students' social and emotional competence. Assessment is a way to generate a snapshot about how students and schools are doing in SECD. The question of the criteria upon which judgments are made is not a settled issue. As noted earlier, there is no uniform or even widespread set of SECD standards.

As a result, different state and private work groups have attempted various approaches to SECD measurement. For example, the Devereux Student Strengths Assessment (DESSA; LeBuffe, Shapiro, & Naglieri, 2014) is a 72-item, standardized, norm-referenced rating scale completed by teachers that assesses the five SEL skill areas outlined by CASEL. A DESSA-Mini is a nine-item version used as a screener; both apply to grades kindergarten through eighth. Apperson has created an online version of the DESSA, along with related SECD supports (Hinton, 2017). One of the most widely used SECD-related assessments internationally is the Emotional Quotient Inventory – Youth Version (EQi-YV; Bar-On & Parker, 2000), which is a self-report measure for children and adolescents (ages 7–18) covering interpersonal, intrapersonal, adaptability, stress management, and general mood areas; two validity scales are also included, positive impression and an inconsistency index. The EQi-YV has a long form, a short form, and an observer version (Wood, Parker, & Keefer, 2009). Several chapters in this volume review other tools for assessing SEL-related variables, including abilities (Chap. 2 by Fiori & Vesely-Maillefer, this volume), dispositions (Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume), and preschoolers' competencies (Chap. 6 by Denham & Bassett, this volume).

These kinds of assessment approaches are sometimes but not always tailored to the specific program contexts in which they are being used for evaluation purposes. In cases where the match is not good, information from assessment does not provide much guidance for improvement. Elias, Ferrito, and Mocerri (2016) recommend a developmentally and contextually sensitive approach to assessment, forged from the specific SECD goals, interventions, and populations in specific settings. The trade-off becomes a lack of standardization in exchange for assessment information highly tailored to one's circumstances and directly useful for intervention improvement.

Funding

Funding for education in the United States comes primarily from four sources: the federal government, state government, local government, and foundations. As of 2011 statistics, approximately 44% of funding came from the state, 47% from the local government, and the remaining amount primarily from the federal government and foundations (Johnson, Zhou, & Nakamoto, as cited in Price, 2015). Within those figures, it is highly difficult to allocate accurately the cost of supporting different instructional areas. One may be able to estimate the cost of a reading program, but reading appears in almost every aspect of schooling; similarly for SECD, one might be able to estimate the cost of an SECD program, but SECD comes into play during every aspect of the school day, including school arrival and departure. Still, current accountability systems are oriented toward increasing specificity and siloing, even while it becomes clear that such structures are not beneficial for most learning and certainly not for SECD.

Therefore, it is instructive to provide a snapshot of the average costs of SEL programming as a way to anticipate the logistics of funding reallocation. Belfield et al. (2015) summarized results of several cost-benefit analyses of SEL programs at the state and national levels. As one example of SEL programming in Washington state, the participant costs for the Seattle Social Development Project were \$3030, and the benefits were \$5800 (net benefit of \$2770); the participant costs for Life Skills Training were \$30, and the benefits were \$1290 (net benefit of \$1260). At the national level, the Life Skills Training program yielded estimated net benefits of \$810 per student (Belfield et al., 2015). School districts that are interested in integrating SECD into their schools at the present moment and would like to estimate the costs can also consult CASEL's *SEL Financial Sustainability Toolkit* with budgeting and calculation cost estimator tools (<http://financialsustainability.casel.org/sustainability-toolkit/>).

What Policy Recommendations Do We Have for the US Secretary of Education and Other Stakeholders?

Our recommendations for the US Secretary of Education are framed by the passage, in 2015, of the "Every Student Succeeds Act" (ESSA; U.S. Department of Education, 2015) and our view of the continued likelihood that states will be more of the locus for practical policy making than will happen at the federal level. There are two aspects of the law that are particularly notable for SECD policy. First, ESSA provides states with much greater autonomy than they experienced under previous legislation, when the federal government had more control of education policy, practice, and funding. Second, the current federal legislation encourages a "well-rounded education," which encompasses the importance of a positive, safe, and supportive school climate and notes the value of social-emotional and character competencies. These two points indicate that the vision to implement evidence-based universal SECD programming in every preschool through high school in America will not come from a direct mandate from the federal government and the Secretary of Education. Indeed, given the obstacles that the Secretary of Education might face in implementing this vision, a key role that the Secretary of Education and the larger federal government can play in manifesting this vision is to "shape the path" (Heath & Heath, 2010) for states and local school districts by removing logistical barriers and providing the information, guidance, and tools to nudge them toward widespread SECD implementation.

State and Federal SECD Leadership

The Secretary of Education has access to the bully pulpit, and using it effectively for SECD is a leadership priority. In order for students' SECD needs to be met, it is critical that SECD is in the consciousness of federal- and state-level decision-makers. The creation of a senior Department of Education position dedicated to

SECD would help ensure that SECD programming gains a “seat at the table” and becomes central to the conversation of a “well-rounded education,” as articulated in ESSA. As an example, Tommy Chang, the superintendent of Boston Public Schools, recently created the position of Assistant Superintendent of Social Emotional Learning and Wellness, showing that it is both possible and advisable to establish such positions in other public school districts in the nation (bostonpublicschools.org/Domain/2141). Moreover, Massachusetts has among the most progressive SECD-related legislation in the nation. This case example can serve as a model for the rest of the nation at the local, state, and federal levels.

Standards

We are not advocating for national SECD standards, though we recognize that others might not agree with this position. While many states have integrated various aspects of SECD competencies into their standards and all 50 states have preschool SECD standards, most states do not have “freestanding” SEL standards that are set apart from other standards. Additionally, most states do not create clear developmental benchmarks and goals for each grade and age level, which makes it difficult to gauge what students should be learning and if they are roughly where they are expected to be. Our view is that developmental and contextual differences mitigate against the creation of clear, national standards. Our preference, as reflected in this set of recommendations, is that standards are set for SECD implementation.

Nevertheless, CASEL has taken the lead in developing the Collaborating States Initiative (CSI) toward the goal of creating common standards. In April of 2016, CASEL issued a request for proposals to states to participate in developing these standards, which will eventually be available to all states. The goal is to enable large school states to borrow and build upon CSI’s standards. In accordance with high-quality standards (Dusenbury et al., 2015), CSI will build standards with the following characteristics (<http://www.casel.org/csi-standards-advisory-committee/>):

- (1) a comprehensive set of free-standing standards and learning goals for SEL with developmental benchmarks for preschool through high school; (2) model policies, including consistent language and terminology that can be used to help embed SEL standards and learning goals throughout the education system; and (3) practice guidelines and other tools to support implementation of social and emotional learning for preschool through high school.

This initiative will learn from preliminary efforts to mandate state standards that have not led to genuine widespread adoption and high-quality implementation. We believe this is due to inadequate infrastructure linked to the mandates. CASEL is also attempting to build policy-relevant knowledge from its comprehensive district initiative, where it is working long term to build sustainable structures and policies (<http://www.casel.org/cdi-results/>). As of this writing, it was too early to tell if initial successes based on external funding transferred into district and school budgets would be continued with fidelity and, if so, what the impacts of the SECD components were.

Support Structures: Professional Community and Networks

As noted earlier, successful SECD emerges from a context of ongoing support. The federal government can encourage SEAs to develop their own technical assistance teams that funnel the federal-level information down to the district level by connecting with local education agencies (LEAs) and offering implementation support. These technical assistance teams will likely be made up of education leaders and teachers well versed in SECD programming as well as evaluation experts and action researchers. A model for this is the New Jersey Alliance for Social, Emotional, and Character Development, noted earlier. In addition to disseminating evidence-based SEL programs and helping with the contextual intricacies of implementation, these teams can assist with developing SECD standards, assessments, evaluations, professional development, policies conducive to SECD programming such as extended school days, and funding strategy and support. Then, the Federal Department of Education can play an important role in compiling and sharing the work of these local support structures.

In the early stages of implementing, evaluating, and refining an SECD program in a school, it is helpful to have an experienced consultant who can aid in this process. Expert consultation is essential for providing insight and wisdom into pilot testing a program during the early stages of the intervention, establish a leadership team to bolster and sustain the program, and create evaluation and improvement systems.

It is advisable that the first year of implementation begins with a pilot program, which an experienced consultant can help steer. It is unlikely and pressure-inducing to expect that a program will be a great success in its first year. Piloting with the assistance of a consultant can mitigate the obstacles of implementation, reduce stress, and help lead to an action research approach of accurately assessing what is working well and what needs to be improved while maintaining the key ingredients of the program. As a New Jersey principal said:

If a pilot works out well, great! You now can continue into a larger program. If the pilot doesn't work, it doesn't mean the entire SEL idea has to be thrown out. After all, it is just a pilot. Who would expect a great success the first time out? We can learn from a pilot, and then we can pilot again. (as cited in Elias et al., 1997, p. 92-93)

A consultant can help establish a strong leadership team and support staff that will celebrate an SECD program's successes and sustain the program through many years and potential challenges. It is helpful for a leadership team to include broad representation from staff at various levels. For instance, a New Jersey school implementing the Social Decision Making/Social Problem Solving program (see the case study in Appendix A) appointed the school psychologist to be the SEL resource teacher. The district superintendent created an SEL administrative liaison position that was filled by his special projects coordinator. The liaison bridged the gap between district administrators and school staff. SEL site coordinators and grade-level captains assisted teachers with implementation issues. A Social Development Coordinating Committee acted as the official leadership team by organizing professional development and community collaborations and assisting with curriculum and evaluation development (Elias & Leverett, 2011).

While the consultant might have a fairly prominent presence in the school and district in the early phases of implementation, particularly during the pilot year, a key goal is to build the capacity of each school and phase out the consultant and his or her team. As implied above, a key component of capacity building is establishing of in-house coordinator and committee. As Elias et al. (1997, p. 97) indicate:

To foster long-term commitment, it is helpful to have a designated program coordinator, social development facilitator, or a social and emotional development committee. Committees typically are responsible for seeing that the various activities needed to effectively meet program goals are carried out. They monitor SEL-related efforts inside and outside the school.

In the initial stages of implementation, the consultant and his or her team is likely playing a large role in assisting with curriculum development and the establishment and implementation of an action research-oriented evaluation and refinement process (Elias & Leverett, 2011). The consultant, and the structural support networks noted earlier, must educate the SECD coordinator and team about additional considerations and modifications to take into account when selecting and implementing an SECD program. In other words, one size does not fit all. For one, there are certain external constraints that influence the selection of an SECD program. In particular, there are few universal programs that extend from preschool through high school. So districts typically will have to coordinate elementary, middle, and high school program components, which can be challenging if districts are fragmented or have a high degree of school-based autonomy. Additionally, evidence-based programs typically have been validated in only a few specific contexts; these contexts may be different from one's particular implementation circumstances. This is particularly the case with ethnic and cultural and socioeconomic diversity. So schools often have to begin with an evidence-based program and then adapt it to their own circumstances. While demanding, such processes have been successful with the guidance of expert consultation and an SECD support network (Elias & Leverett, 2011; Kress & Elias, 2013).

However, teacher and administrative buy-in is only as helpful as the extent of teachers' and administrators' training. It is easy to assume that the teaching and learning of social, emotional, and character skills should be easy and intuitive, unlike algebra or physics, which often require extensive studying and tutoring. However,

There is a world of difference between identifying and requesting skills versus actually teaching students step-by-step how to perform those behaviors. I can demand and expect calculus skills from my students but if I haven't taught them those skills, students are unlikely to be able to conform to my expectations. (Wells, 2014, p. 14-15)

Hence, a critical set of recommendations relates to professional preparation for carrying out SECD.

Educator Preparation and Professional Development for SECD

In universal SECD programs, teachers are on the front lines of delivering the curriculum. Relatedly, research shows that the level of effectiveness of delivering and implementing the SECD program dramatically influences student outcomes

(Durlak et al., 2011; Weissberg et al., 2015). Therefore, it is critical that teachers are trained and well versed in SECD. Teachers should both understand what SECD is and the pedagogical tools for transferring these skills to students and also practice and embody these skills so they can appropriately model them (Elias, Zins, Graczyk, & Weissberg, 2003; Jennings & Frank, 2015). Furthermore, considering that classroom climate and students' sense of support influence their level of engagement (Thapa et al., 2013), particularly as it pertains to the sharing of emotionally evocative thoughts and feelings, teachers must be effective at cultivating a safe and caring environment. These aforementioned factors make a compelling case for the widespread establishment of effective SECD professional development, both preservice (i.e., prior to teacher certification) and in-service (i.e., post teacher certification).

Preservice teacher preparation is determined primarily by each state's teacher certification requirements, which are determined by state policy (Schonert-Reichl et al., 2015). This is equally true of the preparation of educational leaders and school support personnel. While the Secretary of Education cannot mandate SECD-related certification requirements, the Secretary can influence preservice programs by encouraging SEAs and state boards (and departments) of education to incorporate SECD into the certification requirements (Jennings & Frank, 2015). Again, the bully pulpit and convening power are strong policy instruments at both the federal and state levels.

The Secretary can provide actionable recommendations to the states as they consider what to incorporate into certification requirements. Specifically, the Secretary can emphasize that certification require aspiring educators to understand the "principles of child and adolescent social and emotional development"; "learn evidence-based practices and the latest innovations and science in SECD and its practical applications"; integrate SECD content into "student teaching experiences and classroom-based video examples, role plays, and out-of-classroom mentorship"; and apply SECD to their own lives so as to embody these skills and eventually model them for their students (Schonert-Reichl et al., 2015, p. 416).

The latter point, too often neglected, must be highlighted, particularly in preparing educators to work in high-risk, challenging situations. Educators' awareness and development of their own social and emotional skills and character is an important element of their ultimate success. When educators do not manage their emotions and stress, a downward cycle can occur, in which educators become more reactive, which contributes to students' misbehavior and additional teacher stress. Including emotion regulation skills like mindfulness as part of educator preparation has shown promise in lowering teachers' stress, improving teacher efficacy and classroom climate, and allowing teachers to model social and emotional skills for their students (Jennings & Frank, 2015; see also Chap. 14 by Vesely-Maillefer & Saklofske, this volume).

Once again, while the Secretary cannot directly influence in-service PD, the Secretary can provide guidance to states and technical assistance teams on effective forms of in-service SEL PD, as well as the avenues states can pursue to generate additional PD funding. The latter issue is addressed in our "Funding" recommendations.

Insist on Best Practice, Recognition, and Sharing

We know that recognition of the kind that goes to Blue Ribbon schools and other accolades for traditional academic success is valuable, and we know that being recognized as a National or State School of Character has similar benefits. However, the latter is now based in an organization, Character.org, and schools following Character.org's recommended best practices. The Secretary of Education can establish best practices in implementation of SECD across particular approaches (see Elias et al., 2016, for an example of what such a set of recommendations might look like) and encourage collaborative structures within and across states to establish National and State Schools of Social and Emotional Competence and Character.

The convening power of the Secretary's office, combined with the expertise of the senior SECD position and staff, will allow key stakeholders to gather for, participate in, and support such an enterprise. This would include CASEL, Character.org, the National School Climate Center, American Institutes for Research, Council of Chief State School Officers, Learning First Alliance, national professional organizations such as Association for Supervision and Curriculum Development, National Education Association, Association of State Administrators, Principals and Supervisors Association, school psychologists, counselors, social workers, learning consultants, school resource officers, and all of their state counterparts (as well as existing and fledgling state and municipal SECD organizations). All of these are natural collaborators who need a push to come to the table and stay there until the work is done and implementation structures set up.

Extended School Day

One hesitation with implementing universal SECD programs is the time the programs might take away from other core academic subjects. In addition, there are some students for whom the school is an unpleasant place; they are more open to learning during out of school time or during extended school days (Hirsch, Deutsch, & DuBois, 2011). For a variety of reasons, after-school settings can and should be places that emphasize social, emotional, and character development. This may be outside the direct purview of the secretary and chief state school officers, but the connections many schools have with after-school programs, as well as the programs directly run from the school, provide ample opportunity for synergistic coordination of SECD programming (Hirsch et al., 2011). The reality is that when students are taught to better manage their emotions and interact with their peers, classroom disruptions decline and learning improves. Massachusetts passed legislation to fund the Expanded Learning Time (ELT) initiative to expand the school day, partly with the intention of "integrating enrichment and applied learning opportunities into the school day that complement and align with state standards and 21st century skills" (Massachusetts Department of Elementary and Secondary Education, <http://www.doe.mass.edu/redesign/elt/>).

Evaluating Programs

Each school presents a unique set of challenges and opportunities, which is why “one size does not fit all” when it comes to implementing, scaling, evaluating, and improving SECD programs. The one thing we can be certain of is that no two programs will look identical. Therefore, for an SECD program to be effective, it requires a continual evaluation, iteration, and improvement process to fit itself into the unique context of each school. A particularly effective way to assess the effectiveness of a program while ensuring its continued improvement is to take an action research and experimental approach to evaluation and assessment (Elias & Leverett, 2011). Action research is an iterative research process that does not assume that the reality of a program when it is implemented will directly reflect the initial vision for the program. The implementation process reveals shortcomings, obstacles, and opportunities that were not apparent prior to implementation. Action research capitalizes on this learning process and continually assesses, seeks feedback, and creates a process for improving the program. Bryk (2015) refers to this approach as assessing for improvement and shows clearly how integrating Implementation Science, networks of professional communities dedicated to improvement, and action research can accelerate the process of learning to improve.

Assessment

We are not sanguine about systematic SECD assessment for the purposes of meeting ESSA mandates. Linking students’ scores on SECD assessments to schools’ external accountability systems creates pressures for false reporting whereby students and teachers would likely undermine the purpose of the assessments as a feedback and improvement process, by rating themselves higher on these measures than they would if the assessments were not linked to accountability systems (Duckworth et al., 2016).

The ESSA gives states latitude with regard to what aspect of SECD they might choose to assess, including school climate, students’ SECD competencies, and school-level “indicators of effective SEL practice” (Redding & Walberg, 2015, p. 377). As school leaders decide to integrate assessments into their schools, assessment tool selection must be made, and consideration must be given to the skills the tools measure, the grade levels the tools are made for, the quality of the measurement, the costs of the tool, the assessment format, and the type of information the tool provides (Denham, 2015).

One essential role the Secretary can fill is to ensure that there is a centralized, neutral, repository of assessment information. The US Department of Education’s National Center on Safe Supportive Learning Environments (NCSSLE) has already compiled a database of school climate surveys (American Institutes for Research, 2017b).

Considering the bulk of the work of compiling the surveys has been done, we encourage the US Department of Education to communicate with SEAs about these and other resources and guide them on how to apply and interpret them for school improvement efforts. This guidance would be developmental, cultural, and contextual.

Funding

Our specific policy recommendations regarding funding are to ensure equity and to devote funding for the coordinating, convening, collecting, and supportive functions described earlier. This includes providing the financial infrastructure for perhaps lengthening the time needed to attain professional educational credentials to allow for more SECD experience and ensuring adequate in-service training for those currently in the field to build expertise at SECD. SECD programming appears to pay for itself in the form of long-term societal returns (Belfield et al., 2015; Heckman et al., 2013), and its role is so pervasive that SECD funding should be integrated into overall education budgets rather than SECD line item funding for programs. That said, costs will be particularly challenging for low-resourced public schools. These schools, which consist of students who would most dramatically benefit from SECD programming, are most strapped for resources and will struggle to assume these initial costs. While there are alternative funding mechanisms, such as foundations, corporate grants, social impact bonds, and pay for success contracts, there is no substitute for funding to come from regular and ongoing federal and state allocations, much as occurs with language arts and math. Certainly, funding should also be allocated for research into SECD processes, to complement compilations of feedback from practice contexts.

Concluding Thoughts and Summary Recommendations

Because SECD is integral to education, implementing SECD into educational policy will not occur through a few discrete legislative or administrative actions. In Table 12.1, we present a summary of a set of process recommendations that, if enacted at the federal and state levels by the appropriate educational leaders, can create second-order change in how we prepare our youth for future college, career, civic, family, and life success.

Without the formal cultivation of students' social-emotional competence and character, our society risks being characterized by conflict, siloing, incivility, inequity, and unfulfilled potential, rather than collaboration, creativity, peace, fulfillment, and contribution. We must look to a future we can hardly predict, knowing that interpersonal relationships and SECD and character will always be relevant to

Table 12.1 Summary of recommendations for the US Secretary of Education on scaling up social-emotional and character development

Recommendations
1. Use the bully pulpit to advocate for SECD as a priority, and create senior-level department positions dedicated to SECD
2. Encourage SEAs to develop their own technical assistance teams that funnel federal-level information down to the district level by connecting with Local Education Agencies (LEAs) and offering implementation support. A model for this is the New Jersey Alliance for Social, Emotional, and Character Development
3. Ensure teachers understand what SECD is, possess the pedagogical tools for transferring these skills and tools to students, and practice and embody these skills so they can appropriately model them and are effective at cultivating a safe and caring environment through establishing effective SECD professional development, both preservice (i.e., prior to teacher certification) and in-service (i.e., post teacher certification)
4. Encourage SEAs and state boards (and departments) of education to incorporate SECD into all educator certification requirements
5. The secretary of education can establish best practices in implementation of SECD across particular approaches and encourage collaborative structures within and across states to establish national and state schools of social and emotional competence and character
6. Ensure that after-school settings are places that emphasize social, emotional, and character development
7. Create a centralized, neutral, repository of SECD assessment information
8. Allocate sufficient funding to ensure equity in the coordinating, convening, collecting, and supportive functions described herein, including the financial infrastructure as needed to lengthen the time needed to attain professional educational credentials to allow for more SECD experience and ensure adequate in-service training for those currently in the field to build expertise at SECD

human accomplishment and thriving. We need to live, put into policy, and implement the inspiring words that are too often simply quoted:

The function of education, therefore, is to teach one to think intensively and to think critically. But education which stops with efficiency may prove the greatest menace to society. The most dangerous criminal may be the man gifted with reason but with no morals.

We must remember that intelligence is not enough. Intelligence plus character – that is the goal of true education.

-- Martin Luther King, Jr.

The real core of education is the relationship between the teacher and the student, and the extent to which that relationship nurtures the longing of the child to matter in the world, and the longing of the teachers to nurture and fulfill that desire.

Although we have been working on school reform for almost a half-century, if we are honest, we have not yet focused on the core. The social and emotional factors in learning are the core.

-- Tim Shriver and Jennifer Buffett.

I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.

-- Maya Angelou.

Appendix A: Case Study: What Does a Scalable Evidence-Based SEL Program Look Like? “Social Decision Making/Social Problem Solving” (SDM/SPS)

Overview of SDM/SPS

Social Decision Making/Social Problem Solving (SDM/SPS) is an evidence-based SEL program (Butler & Poedubicky, 2006). SDM/SPS is a universal model that is integrated throughout a school, targeting every student during the school day. The rationale behind SDM/SPS’s broad and deep reach is for students to “overlearn” and “internalize” the skills to manage their emotions and “make responsible prosocial decisions, even when under stress” (Elias & Bruene, 2005, p. 133). Just as “players overlearn skills through repetition and drill, both off the field or stage and on,” students benefit from overlearning social-emotional skills for the “game of life [...] to a point where they are accessible for use in new, complex, or challenging life situations” (Elias & Bruene, 2005, p. 133).

SDM/SPS emphasizes responsible decision-making through an eight-step decision-making process known as FIG TESP, which stands for “identify Feelings, Identify the problem, Goal setting, Think of solutions, Envision consequences, Select the best solution, Plan it/try it, and Notice what happens” (Elias & Bruene, 2005, p. 133).

A Window Into a School Implementing SDM/SPS

Elias & Bruene, (2005, p. 131–139) provide a window into a school that has implemented SDM/SPS and has integrated the program throughout their school and classrooms, ranging from the core academic subjects to health, gym, and music class. Here is a snapshot of Ms. Brodka’s health class, in which she teaches students self-awareness by showing students how to identify physical signals of their stress-induced emotions:

Ms. Brodka asks, “How do you feel when someone calls you a name?” “Upset,” “angry,” and “sad,” different children respond, each taking turns holding a “speaker power” object. “Great! Where in your body do you feel upset, angry, and sad? For example, when I’m angry, my face gets hot or sometimes my head hurts.” Once again, hands go up, and the object is given to a boy named Shaun. “I feel it in my hands—they clench up!” Another boy, Sal, waits to receive the object and then says, “I feel it in my head—it pounds!” “This is excellent,” exclaims the teacher. “Now what do you do to make those physical signs go away and feel better?” Shaun says that he sometimes hits people with his clenched hands, and Sal says that he yells out mean things to people when his head hurts. “And do you feel better?” “No, I get in trouble.” (p. 135).

Ms. Brodka transitions to teaching the class self-management and emotion regulation techniques through a skill called “Keep Calm,” which helps students to man-

age and master emotional responses, so they are in a position to make responsible decisions:

Ms. Brodka models [“Keep Calm”] by breathing in for 5 seconds, holding for 2 seconds, and then exhaling for 5 seconds. She repeats the skill several more times, slower each time. Next she asks the class to practice it with her. Handing the object once again around the class. She asks students to tell how they felt as they did the Keep Calm skill several times. Ms. Brodka then shows the class her Keep Calm area where students can go when they need to calm down. (Elias & Bruene, 2005, p. 135)

“Keep Calm,” which is one of many tools the students will learn to use, is also used in Mrs. Fehn’s math class to reduce test anxiety for classroom and standardized tests. Students are not only applying this tool across their classrooms, but they have been practicing “Keep Calm” for over two years, which allows students to master this tool and automatically apply it during stressful situations, ranging from conflicts in the cafeteria or the classroom to musical or athletic performances. (Elias & Bruene, 2005, p. 138)

SDM/SPS – which is an evidence-based program endorsed by CASEL among others – has persisted in this school for over two decades, having been established in accordance with the best practices delineated in this chapter and weathered implementation challenges along the way. It has also served as the basis for adaptations in predominantly African-American and Latino urban schools and schools in such diverse locations as China, Australia, Israel, and the Inuit peoples of Canada.

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Part III
Applications in Post-Secondary Contexts

Chapter 13

Emotional Intelligence and Youth Career Readiness



Annamaria Di Fabio and Donald H. Saklofske

Abstract Amidst the global youth unemployment crisis, the relationship between emotional intelligence (EI) and youth career readiness is an important theme of research for enhancing positive youth development and strengthening human capital. This chapter reviews studies focusing on trait and ability models of EI and their impact on youth career readiness in terms of career decision variables (career decision-making difficulties, career decision-making self-efficacy, decision-making styles) and employability. The chapter also describes empirically supported interventions that contribute to promoting career readiness through the development of EI and further delineates possible implications for career counselors and educators. Finally, some research and intervention suggestions to promote career readiness of youth in a preventive framework are introduced.

The unprecedented increase in youth unemployment in the past decade has reached the level of a global crisis (Morsy, 2012). Average unemployment rates for youth aged 15–24 years are systematically higher than average unemployment rates for adults in nearly every country around the world, but especially in the developed economies (International Labour Organization [ILO], 2016). Youth are particularly vulnerable in the face of today's rapidly changing labor markets, decent work deficits, difficult job transitions, and increasing demands for twenty-first-century skills, leading to career indecision and delays joining the labor force (ILO, 2016). Therefore, understanding and investing in factors that promote youth's career readiness and twenty-first-century skills have never been timelier or more important internationally (Kluve et al., 2016). Of the various twenty-first-century skills considered to be important for success in

A. Di Fabio (✉)

Department of Education and Psychology (Psychology Section), University of Florence,
Florence, Italy

e-mail: adifabio@psico.unifi.it

D. H. Saklofske

Department of Psychology, University of Western Ontario, London, ON, Canada

e-mail: dsaklofs@uwo.ca

today's world of work, competencies encompassed by the construct of emotional intelligence (EI) are receiving growing recognition (Belfield et al., 2015; Heckman & Kautz, 2012; Kyllonen, 2013). Broadly defined, EI includes abilities and dispositions related to perceiving, understanding, utilizing, and managing emotions of self and others to promote thinking, problem-solving, and goal-directed behavior (Bar-On, 1997; Mayer & Salovey, 1997).

It is important to underscore the complexity of the EI construct.¹ In the classification most often agreed to (Stough, Saklofske, & Parker 2009), two different models best reflect the current status of EI theorizing and research: ability EI models and trait EI models. Ability EI models define EI as a set of emotional cognitive abilities related to crystallized emotion knowledge and fluid processing of emotional information (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2008; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume). Ability EI is measured with tests of maximal performance, such as the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002). The MSCEIT assesses four abilities outlined in Mayer and Salovey's (1997) EI model: emotion perception, emotion utilization to facilitate thought, emotion understanding, and emotion management.

Trait EI models concern with emotion-related self-perceptions and dispositional tendencies (Bar-On, 1997; Petrides & Furnham, 2001; see also Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). Trait EI is measured with self-report questionnaires, such as the Emotional Quotient Inventory (EQ-i; Bar-On, 1997) and the Trait Emotional Intelligence Questionnaire (TEIQue; Petrides, 2009). The EQ-i assesses self-perceived competencies in identifying and understanding one's own emotions (intrapersonal), empathy and social skills (interpersonal), emotion management and self-control (stress management), and flexibility and perseverance (adaptability). The TEIQue assesses emotion-related self-perceptions in similar areas, including emotion appraisal and expression, empathy and social skills, emotion management and self-control, adaptability and perseverance, as well as positive emotionality.

Since the beginning of the twenty-first century, there has been a growing interest in the role of EI in the career decision-making process (Brown, George-Curran, & Smith, 2003; Emmerling & Cherniss, 2003). The first theoretical reflection on the possible contribution of EI in career decision-making process was offered by Emmerling and Cherniss (2003). They proposed that individuals with higher EI would be more aware of their career interests and values and more able to manage their emotional responses in the career decision-making process (Emmerling & Cherniss, 2003). Individuals who are better able to understand and manage their emotions are likely more able to

¹Regarding the complex evolution of the classifications of the existent EI models, in the literature, it is possible to find the following: the first classification by Mayer, Salovey, and Caruso (2000) that distinguishes between mental ability models and mixed models, a second classification by Petrides and Furnham (2000, 2001) that distinguishes between the trait EI and information-processing EI, and up to the more current classification summarized by Saklofske and colleagues (Saklofske et al., 2003; Stough et al., 2009) that distinguishes between ability EI models and trait EI models that include self-reported EI (Bar-On, 1997) and trait emotional self-efficacy (Petrides & Furnham, 2001).

anticipate and prevent the emotional consequences related to a particular career choice, avoiding activities and tasks that would be unrewarding on the one hand, while on the other being more able to choose career options that would bring them greater work and life satisfaction (Emmerling & Cherniss, 2003). Following this proposal, Brown et al. (2003) demonstrated a positive relationship between trait EI and career decision-making self-efficacy and vocational exploration and commitment in a sample of American undergraduates. These results supported the view that individuals who are more confident in their ability to perceive and use emotions to facilitate thought, and to understand and manage emotions, are also more confident in being able to manage and realize key career decision-making tasks (Brown et al., 2003).

Following the study by Brown et al. (2003), the relevance of EI in career readiness did not receive much attention. However, more recently, the efforts to empirically study the relations of EI with career readiness in terms of career decision variables (i.e., career decision-making difficulties, career decision-making self-efficacy, decision-making styles) and employability were renewed in two International Research and Intervention Laboratories: Psychology for Vocational Guidance and Career Counseling (LabOProCCareer) and Positive Psychology and Prevention (PosPsyc&P) at the Department of Education and Psychology of the University of Florence, Italy. Employing the different EI models and measures noted above (MSCEIT, EQ-i, and TEIQue), this program of research investigated whether trait and ability EI were associated with career decision-making aspects and employability independently of fluid intelligence and basic personality traits (e.g., Di Fabio & Kenny, 2012; Di Fabio, Palazzeschi, & Bar-On, 2012; Di Fabio & Saklofske, 2014a). From a preventive perspective, EI also represents an important theme of research for enhancing positive youth development and resilience (Di Fabio, Bernaud, & Loarer, 2014; Di Fabio & Kenny, 2015; Di Fabio, Kenny, & Claudius, 2016) and, furthermore, can be developed through specific training (Dacre Pool & Qualter, 2013; Di Fabio & Kenny, 2011; Kotsou, Nelis, Grégoire, & Mikolajczak, 2011; Nelis et al., 2011; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009). Training programs developed to enhance EI also appear to enhance both career decision variables (Di Fabio & Kenny, 2011) and employability (Nelis et al., 2011), opening future intervention prospects for career counselors and educators to promote positive career readiness of youth (Di Fabio et al., 2016; Di Fabio & Kenny, 2015; Kenny & Hage, 2009).

This chapter provides a detailed summary of findings from this growing program of research, followed by a review of empirically supported EI interventions for promoting career readiness of adolescents and young adults.

EI and the Career Decision-Making Process

In today's uncertain and unstable economy, where a typical career trajectory involves multiple transitions and job changes, deciding on a career is no longer a straightforward task of person-job matching, but rather a complex process of adaptation to changing market conditions requiring personal flexibility and ability to

tolerate stress and uncertainty (Brown et al., 2003; Krieschok, Black, & McKay, 2009). Under such conditions, EI may be particularly relevant for career decision-making, as individuals high in EI would be less overwhelmed by the competing emotions, demands, and priorities and thus less paralyzed by indecision. Following from the earlier works by Emmerling and Cherniss (2003) and Brown et al. (2003), a number of more recent research investigations have been carried out analyzing the relationship between EI and career readiness and its decision-making aspects (Di Fabio, 2011; Di Fabio et al., 2012; Di Fabio & Blustein, 2010; Di Fabio & Kenny, 2012; Di Fabio & Palazzeschi, 2008; Di Fabio & Palazzeschi, 2009; Di Fabio, Palazzeschi, Asulin-Peretz, & Gati, 2013; Di Fabio & Saklofske, 2014a). The main outcome variables included in these studies are career decision-making difficulties, career decision-making self-efficacy, and decision-making styles.

Career Decision-Making Difficulties

According to Gati, Krausz, and Osipow (1996), it is possible to distinguish career decision-making difficulties according to the stage in the decision-making process during which they occur. The career decision-making difficulties that emerge before starting the decision-making process are more related to a lack of readiness (e.g., lack of motivation, indecision, dysfunctional beliefs), in contrast to the career decision-making difficulties that arise during the actual decision-making process. The latter are further divided into two kinds of difficulties: those related to a lack of information (e.g., about oneself, jobs, sources of information) and those more related to having inconsistent information (e.g., unreliable, conflictual).

The first study to analyze the relationship between EI and Gati et al.'s (1996) taxonomy of career decision-making difficulties was conducted by Di Fabio and Palazzeschi (2008) with a sample of Italian young workers engaged in paid professional internships. This is an interesting target group, because they alternate training and work time before committing themselves to a specific career, and thus they are at a critical stage for dealing with important choices and transitions regarding their future. This study assessed trait EI with the EQ-i-Short form (EQ-i:S; Bar-On, 2002). Multiple regression analyses showed that the EQ-i:S scores explained 25% of variance in decision-making difficulties due to lack of readiness (intrapersonal $\beta = -0.31$, stress management $\beta = -0.20$), 28% of variance in difficulties due to lack of information (intrapersonal $\beta = -0.55$, adaptability $\beta = -0.49$), and 14% of variance in difficulties due to inconsistent information (intrapersonal $\beta = -0.36$, adaptability $\beta = -0.19$). These results indicate that lower levels of trait EI are associated with all three types of career decision-making difficulties. Thus, lower trait EI characterizes those persons who manifest less readiness to begin the decision-making process; a lack of information about oneself, occupations, and sources of assistance; and greater confusion about the available information. The study also revealed that the intrapersonal dimension of trait EI was the strongest unique predictor (inverse) of each type of

career decision-making difficulties, highlighting the relevance of understanding one's own emotions in the construction of one's own career.

Because the EQ-i:S measures personality facets that overlap with basic dimensions of personality such as emotional stability and extraversion (Parker, Keefer, & Wood, 2011), it was important to demonstrate its incremental predictive validity over these basic personality dimensions, which have also been implicated in career indecision (Feldman, 2003). Thus, a follow-up study (Di Fabio & Palazzeschi, 2009) also examined the relationship between the EQ-i:S and the three types of career decision-making difficulties in a sample of Italian young workers engaged in paid professional internships; however, they additionally controlled for the effects of Big Five personality traits. The results of hierarchical regressions showed that the EQ-i:S scores explained significant amounts of additional variance in decision-making difficulties due to lack of readiness (11%), lack of information (5%), and inconsistent information (7%), beyond the variance accounted for by the Big Five (19%, 37%, and 14%, respectively). These results are important because they indicate that the effects of trait EI on all three types of career decision-making difficulties are not redundant with basic personality and that trait EI can improve the prediction of these outcomes by as much as 50% relative to the Big Five alone, particularly for difficulties experienced prior to the beginning of the career decision-making process.

Another incremental validity study (Di Fabio et al., 2012), conducted with Italian university students, examined whether the EQ-i:S was able to add significant incremental variance to the prediction of the three types of career decision-making difficulties, over and above the variance explained by the Big Five and also by core self-evaluations. Core self-evaluations reflect individuals' global perceptions of their self-worth, self-efficacy, and locus of control, and these self-traits are among the strongest dispositional predictors of career-related outcomes (Judge & Bono, 2001). Given that trait EI can be conceptualized as an emotion-related domain of self-concept (Keefer, 2015), it was important to show that its effects on career indecision are not redundant with global self-evaluations. The results of hierarchical regressions showed that the EQ-i:S scores explained significant amounts of additional variance in decision-making difficulties due to lack of readiness (21%), lack of information (23%), and inconsistent information (18%), beyond the combined variance accounted for by the Big Five and core self-evaluations (33%, 26%, and 30%, respectively). These results build on Di Fabio and Palazzeschi's (2009) findings by showing that trait EI is a distinctive aspect of both personality and self-concept structures, with an independent role in career indecision.

In the career decision-making field, it is important to make a distinction between career indecision and general indecisiveness (Osipow, 1999; Savickas, 2004). Osipow (1999) describes career indecision as a normal stage which all people must traverse during their lifetime. Therefore, it is possible to distinguish career indecision, corresponding to a normal developmental phase of life, and general indecisiveness, which is more akin to a personality characteristic that manifests itself in the difficulty making decisions across a variety of contexts. More recently, Savickas (2004) distinguished between undecided individuals, characterized by a short-term or temporary inability to make a decision but who are potentially ready for decision-making, and

indecisive individuals, who instead are characterized by chronic anxiety and a lack of ability to engage in effective problem-solving. In a sample of Italian university students, Di Fabio et al. (2013) examined the differential associations of career indecision and general indecisiveness with trait EI (measured with the EQ-i total score) and personality dimensions of extraversion and emotional stability. The results of stepwise multiple regressions showed that career indecision was more strongly associated with trait EI than with basic personality, whereas general indecisiveness was more strongly associated with basic personality (particularly emotional stability, negatively) than with trait EI. These results not only confirm the unique role of trait EI in career-related decision-making, but they also demonstrate its discriminant validity from other personality characteristics associated with decision-making ability.

All four studies described above used the EQ-i measures, limiting their conclusions to the trait EI domain. To advance our knowledge of career readiness and its relationship to EI, it was essential to compare the relative contributions of both trait EI and ability EI and to examine their incremental validity over basic personality and cognitive intelligence. In a sample of Italian high school students, Di Fabio and Saklofske (2014a) analyzed simultaneously the relationships of career indecision with ability EI (measured with the MSCEIT total score) and trait EI (measured with the EQ-i and the TEIQue total scores), while controlling for the effects of fluid intelligence and Big Five personality traits. At the bivariate level, all three EI measures were negatively correlated with career indecision. However, once the variance due to fluid intelligence and the Big Five traits was accounted for (20%), only the EQ-i and the TEIQue explained significant incremental variance in career indecision (4% and 9%, respectively). These results suggest that ability EI is not an independent predictor of difficulties in making career decisions, while at the same time supporting the unique role of trait EI. The TEIQue explained more variance than the EQ-i, probably because it provides a more comprehensive coverage of the trait EI sampling domain.

Career Decision-Making Self-Efficacy

In the career field, career decision-making self-efficacy is another important variable, defined as the belief about one's own capability to successfully perform tasks related to the career decision-making process (Betz, Klein, & Taylor, 1996). Career decision-making self-efficacy is inversely related to career indecision: individuals who are more informed about career choices and ready to make a decision also report feeling more self-efficacious about making a career-related decision (Betz et al., 1996). Di Fabio and Saklofske (2014a) analyzed the relationships of career decision-making self-efficacy with both ability EI (measured with the MSCEIT total score) and trait EI (measured with the EQ-i and the TEIQue total scores), again controlling for the effects of fluid intelligence and Big Five personality traits. At the bivariate level, all three EI measures were positively correlated with career decision-making self-efficacy. However, once the variance due to fluid intelligence and the Big Five

traits was accounted for (45%), only the EQ-i and the TEIQue explained significant incremental variance in career decision-making self-efficacy (5% and 10%, respectively). This study again showed that trait EI was a significant predictor of career decision-making self-efficacy independent of fluid intelligence and personality traits, whereas ability EI did not contribute incrementally to this prediction.

Decision-Making Styles

Decision-making style is another relevant construct in the career decision-making domain. The construct of decision-making style was first used to indicate an individuals' strategy used to resolve decisional conflict (Janis & Mann, 1977) and was further operationalized by Mann, Burnett, Radford, and Ford (1997) with the Melbourne Decision Making Questionnaire (MDMQ). The MDMQ model describes four decisional styles: avoidance, the tendency to avoid conflict by giving others the responsibility to make decisions; vigilance, a careful and adaptive way in decision-making process; procrastination, the tendency to postpone the choice; and hypervigilance, the tendency to attempt, frenetically, to resolve a decision-making conflict. Of the four styles, vigilant style is adaptive, whereas the other three styles are considered to be maladaptive.

Scott and Bruce (1995, p. 820) further defined decisional style as "the learned habitual response pattern exhibited by an individual when confronted with a decision situation. It is not a personality trait, but a habit-based propensity to react in a certain way in a specific decision context." The General Decision Making Style scale (GDMS; Scott & Bruce, 1995) identifies five decisional styles: the rational style, referring to extensive information research and a systematic evaluation of identified alternatives; the intuitive style, which describes confidence in one's own intuition and feelings; the dependent style, defined by seeking the advice and opinions of others before deciding; the avoidant style, where one attempts to avoid decision-making as much as possible; and the spontaneous style, which reflects immediate intuition and the desire to reach a decision as quickly as possible. It is also interesting to consider the more recent definition by Thunholm (2004, p. 941), who formulated a more integrated definition of decisional style as a "pattern of response given by an individual in a decisional situation. This pattern of response is determined by the decisional situation, by the decisional task and by the same decider."

Di Fabio and Blustein (2010) examined the relationships of trait EI (measured with the EQ-i:S) with the four decisional conflict styles outlined in Mann et al.'s (1997) MDMQ model, in a sample of Italian high school students. Multiple regression analyses showed that the EQ-i:S scores explained 32% of variance in avoidance (intrapersonal $\beta = -0.49$, interpersonal $\beta = -0.24$), 30% of variance in vigilance (adaptability $\beta = 0.49$), 23% of variance in procrastination (intrapersonal $\beta = -0.35$, interpersonal $\beta = -0.17$), and 18% of variance in hypervigilance (intrapersonal $\beta = -0.38$). These results highlight the importance of trait EI in facilitating effective strategies in problem-solving. Specifically, the use of maladaptive decisional styles

(avoidance, procrastination, hypervigilance) is most strongly associated with poor awareness and understanding of one's own emotions (intrapersonal dimension). On the contrary, increased use of adaptive vigilance is most strongly related to being able to deal with problems flexibly and with perseverance (adaptability dimension).

A study by Di Fabio and Palazzeschi (2007), conducted on Italian young workers engaged in paid professional internships, aimed to determine if the EQ-i:S added incremental variance beyond that accounted for by the Big Five personality traits in predicting the MDMQ decisional conflict styles. The results of hierarchical regressions showed that the EQ-i:S scores explained significant amounts of additional variance in avoidance (13%), vigilance (17%), procrastination (21%), and hypervigilance (10%) beyond the variance accounted for by the Big Five traits (34%, 14%, 22%, and 32%, respectively). These results, taken together, suggest that persons with higher trait EI seem better equipped to effectively resolve decision-making conflicts.

To further explore the contribution of EI to decision-making styles, it was necessary to examine both trait EI and ability EI. In a sample of Italian high school students, Di Fabio and Kenny (2012) looked at the relationship between the five decision-making styles outlined in Scott and Bruce's (1995) GDMS model and trait EI (assessed with the EQ-i) and ability EI (assessed with the MSCEIT). Multiple regression analyses with the EQ-i scores showed that trait EI explained significant variance in each of the five decision-making styles: 37% in the rational style (adaptability $\beta = 0.56$), 12% in the intuitive style (interpersonal $\beta = 0.21$), 11% in the dependent style (intrapersonal $\beta = -0.31$), 22% in the avoidant style (intrapersonal $\beta = -0.39$), and 21% in the spontaneous style (stress management $\beta = -0.31$, adaptability $\beta = -0.28$). Separate multiple regressions for the MSCEIT scores showed that ability EI explained significant variance only in the avoidant and spontaneous styles (10% and 8%, respectively). Follow-up hierarchical regressions including both measures showed that the MSCEIT scores added only small amounts of incremental variance (1–4%) above the variance accounted for by the EQ-i scores. These results show that self-perceptions of EI are more salient in relation to decision-making styles than actual EI abilities. Of the specific trait EI competencies, being able to deal with problems flexibly and with perseverance (adaptability) is associated with more methodical (rational) and less impulsive (spontaneous) decision-making styles, whereas poor awareness and understanding of one's own emotions (intrapersonal) is associated with more dependent and avoidant decision-making styles (Di Fabio & Kenny, 2012).

Summary

Overall, the research reviewed in this section provides compelling evidence for the unique role of trait EI in facilitating the career decision-making process in both adolescents and young adults. Regardless of individual differences in general ability or personality, youth high in trait EI – particularly those who have greater clarity about their emotions and who routinely use emotion information to

facilitate flexible problem-solving – feel more psychologically ready to make a career choice, more resourceful in obtaining relevant information, less overwhelmed by the available information, and more confident in their ability to make effective career decisions; they also make their decisions in a more focused and systematic way, without avoiding, procrastinating, making a rush decision, or deferring the decision to someone else.

However, the chief limitation of this body of evidence is its cross-sectional and correlational nature, which does not allow making inferences about cause-and-effect relationships. Controlled intervention studies are needed to provide experimental evidence for the causal role of trait EI in the career decision-making process. Therefore, career counselors and educators may wish to consider the relevance of trait EI in client assessment and development, in order to facilitate further knowledge about the predictors of more effective career decision-making (Di Fabio, 2013; Di Fabio & Kenny, 2011; Di Fabio, Bernaud, & Loarer, 2014; Di Fabio et al., 2016). Several examples of such intervention studies are reviewed in a later section of this chapter.

In contrast to trait EI, ability EI does not seem to offer much incremental predictive utility for career decision-making variables beyond what can be explained by general ability and personality. It is possible that common method variance can account for some of the shared variance between trait EI and career decision-making variables, which were assessed through self-report. However, differential effects of trait versus ability EI have also been found for objectively measured career-related outcomes like job performance, where the effects of ability EI are similarly weaker than the effects of trait EI (O’Boyle, Humphrey, Pollack, Hawver, & Story, 2011). Common explanations for these differences highlight the distinction between a person’s aptitude to behave emotionally intelligently (ability EI) and their habitual emotion-related dispositions (trait EI). For example, even though a person may be capable of managing their emotions effectively when instructed to do so (high ability EI), they may not necessarily apply their abilities in everyday emotional encounters (low trait EI). Consequently, EI competencies that are applied at the trait level would be more proximal predictors of behavior than latent EI abilities (Keefer, 2015; Mikolajczak, 2009).

EI and Employability

The current times are characterized by continuous challenges related to strong economic changes, globalization, variability in the labor market, rapid spread of new technologies, and declines in job security (Guichard, 2013; Savickas, 2011). In this context, work and life transitions are therefore more frequent and challenging, and employment prospects cannot be predicted with certainty (Guichard, 2013; Savickas, 2011). Workers across almost all occupations and jobs are engaged in lifelong learning, mastering the use of new technologies, and must now remain flexible in their work choices and career aspirations, work to create their own opportunities, and develop the capacity to adapt and maintain

employability (Savickas, 2011). Employability is not construed as a synonym for employment but as an individual-difference characteristic that includes, on the one hand, the possession of professional up-to-date skills and, on the other hand, the motivation and adaptive capacity to increase ones' own employability (Fugate, Kinicki, & Ashforth, 2004). Thus, it is more than ever important for career counselors and young people themselves to take into account which possibilities of employment are available to them and what factors influence this perception (Di Fabio & Bucci, 2013, 2015; Di Fabio & Palazzeschi, 2013; Rothwell & Arnold, 2007).

Understanding Employability

In relation to employability, a number of factors come to the fore, including ability to maintain employment (Hillage & Pollard, 1998), personal resources (Fugate et al., 2004), professional expertise, ability to anticipate what factors can promote one's own employability, ability to optimally invest in the development of one's own employability, balance between personal and professional needs (Van der Heijde & Van der Heijden, 2006), sustainability, qualifications, future-oriented perspective (Rothwell & Arnold, 2007), job satisfaction and success (Dacre Pool & Sewell, 2007), meta-competences such as behavioral adaptability, self-knowledge, career orientation awareness, sense of purpose, and self-esteem (Coetzee, 2008), as well as other internal and external factors (De Cuyper & De Witte, 2011). Understanding the multitude of factors that can impact employability is particularly relevant in a preventive framework that recognizes the importance of both reducing risks and increasing resources and strengths (Di Fabio et al., 2016; Hage et al., 2007; Kenny & Hage, 2009; Di Fabio, Kenny, & Minor, 2014). And in the context of this chapter, the relevance of EI in employability must also be factored into the discussion.

Dacre Pool and Sewell (2007) were the first to formally include EI as a central component in their theoretical model of graduate employability, the CareerEDGE model (see also Dacre Pool, 2017). They defined employability as "having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful" (Dacre Pool & Sewell, 2007, p. 280). In the CareerEDGE model, EI is recognized as one of five essential elements that all university students need to develop, reflect on, and evaluate in order to enhance their self-esteem, self-efficacy, and self-confidence and thereby reach their full employability potential. The other four essential elements include career development learning, work and life experience, subject-specific knowledge and skills, and generic transferrable skills. Although the CareerEDGE model was developed as a theoretical framework, a growing number of empirical studies are supporting the proposed role of EI in employability.

Studies on EI and Employability

Coetzee and Beukes (2010) carried out a study with a sample of predominantly Black South African adolescents (mean age 17 years), where positive relations emerged between trait EI, measured with Schutte et al.'s (1998) Assessing Emotions Scale (AES), and perceived employability. Trait EI was significantly and positively correlated with the five employability dimensions: basic skills ($r = 0.77$), goal-driven behavior ($r = 0.44$), creative learning skills ($r = 0.48$), communication skills ($r = 0.43$), and business acumen ($r = 0.49$). Of the specific trait EI dimensions, managing emotions and utilizing emotions to facilitate thinking and problem-solving emerged as the most consistent correlates, highlighting the importance of these competencies in young people's perceptions of employability (Coetzee & Beukes, 2010).

Dacre Pool and Qualter (2013) analyzed the relationship between self-reported EI competencies, assessed with the Emotional Self-Efficacy Scale (ESES, Kirk, Schutte, & Hine, 2008), and perceived employability in a sample of working graduate students attending a university in England. Self-reported employability was positively associated with the four ESES dimensions: using and managing own emotions ($r = 0.42$), identifying and understanding own emotions ($r = 0.22$), dealing with emotions in others ($r = 0.32$), and perceiving others' emotions through facial expressions and body language ($r = 0.26$). Graduate students who were more confident in their EI abilities, particularly managing and utilizing emotions, perceived themselves also as more employable.

In the Italian context, Di Fabio and Bucci (2013) studied the relationship between trait EI (measured with the EQ-i) and perceived employability in a sample of Italian university students, controlling for the effects of fluid intelligence and the Big Five personality traits. The results of hierarchical regressions showed that the EQ-i scores explained an additional 18% of variance in self-reported employability, on top of the 11% accounted for by the Big Five traits. Di Fabio (2014c) conducted a further study of perceived employability among Italian university students, looking at the relative contributions of both trait EI (measured with the TEIQue) and ability EI (measured with the MSCEIT), as well as the Big Five personality traits. They found that ability EI did not contribute significantly to perceived employability, whereas trait EI accounted for an incremental 21% of the variance, on top of the 10% accounted for by the Big Five traits. Taken together, these results provide strong support for the unique role of trait EI, but not ability EI, in students' perceptions about personal characteristics that make them employable in the current labor market. Of note, the unique share of trait EI is double that of basic personality dimensions.

A more recent study (Di Fabio & Kenny, 2015) with a sample of Italian high school students examined the relationships of trait EI (measured with the EQ-i), as well as perceived social support from friends and teachers, with three career readiness factors including general resilience, perceived employability, and career decision-making self-efficacy. Trait EI and perceived social support (especially

from teachers) were positively associated with all three career readiness variables, together explaining 35% of variance in general resilience, 10% of variance in perceived employability, and 5% of variance in career decision-making self-efficacy. These results underscore the relevance of both individual resources (trait EI) and social resources (e.g., teacher support) in career readiness of young people.

Summary

The research reviewed in this section supports a relatively robust positive relationship between perceived employability and trait EI (evidence for ability EI is scarce and therefore inconclusive). Of further importance is that there is evidence that trait EI can be developed and increased through specific training (Dacre Pool & Qualter, 2012; Di Fabio & Kenny, 2011; Kotsou et al., 2011; Nelis et al., 2009; 2011; Vesely, Saklofske, & Nordstokke, 2014). This raises the interesting possibility that while trait EI is centered within a growing literature on psychological health and well-being (Martins, Ramalho, & Morin, 2010; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016), it has a preventive and proactive potential through its links with important life decisions and skills associated with career and work (Dacre Pool, 2017; Di Fabio, Bernaud, & Loarer, 2014; Di Fabio et al., 2016). While further research is required to determine just how this relationship works, it would seem possible that encouraging the development of trait EI from childhood onwards has the potential, directly or indirectly, to also enhance career-based decisions and employability skills (Di Fabio, 2014a; Di Fabio & Kenny, 2015), support work placement and job success including job transitions, and thereby tackle the new challenges of the twenty-first century (Guichard, 2013; Savickas, 2011).

EI Interventions to Promote Career Readiness

The increasing interest in EI is due both to its established relationship with well-being and performance outcomes (Martins et al., 2010; O'Boyle et al., 2011; Sánchez-Álvarez et al., 2016) and the growing experimental literature showing that this set of competencies can be increased through specific training (Dacre Pool & Qualter, 2012; Di Fabio & Kenny, 2011; Kotsou et al., 2011; Nelis et al., 2009, 2011; see also Chap. 15 by Boyatzis & Cavanagh, this volume; Chap. 14 by Vesely-Maillefer & Saklofske, this volume). This makes EI an attractive target for both prevention and intervention, and a growing literature has appeared over the past decade presenting and evaluating programs intended to develop and increase EI.

Evidence from Controlled Evaluation Studies

Can EI be improved through training? In the Belgian context, Nelis et al. (2009) carried out a controlled study evaluating the effectiveness of a 10-h EI program consisting of four weekly group training sessions (2.5 h each) with a sample of university students. The program was designed to teach and practice four core competencies outlined in Mayer and Salovey's (1997) EI model: emotion appraisal, emotion facilitation of thinking, emotion understanding, and emotion regulation. Students in the intervention group and a non-training control group completed self-report measures of trait EI, emotion appraisal, and emotion regulation, as well as a performance-based measure of emotion understanding, at three time points: before, immediately after, and 6 months after the program. The results of this study showed that students in the EI training group (but not in the control group) significantly increased in the overall level of trait EI and in the specific competencies of appraising and regulating emotions, an effect that persisted 6 months after the intervention.

In England, Dacre Pool and Qualter (2012) developed and evaluated an 11-week university EI course for second-year undergraduate students, consisting of weekly 2-h classes that addressed the four components of Mayer and Salovey's (1997) EI model. Students in the EI course (intervention group) and in a parallel career-planning course with no explicit EI content (control group) completed measures of ability EI (the MSCEIT) and trait EI (the ESES) during the first and last class of the course. The results showed that, relative to students in the career-planning course, students in the EI course experienced significant increases in trait EI, as well as in the MSCEIT scores for understanding and managing emotions.

Kotsou et al. (2011) developed and evaluated an intensive 2.5-day EI program for adults consisting of 15 h of group-based training. The program was designed to improve five core EI competencies: emotion appraisal, emotion understanding, emotion expression, emotion management, and utilization of emotion to facilitate thought. Participants in the intervention group and a non-training control group completed self-report measures of trait EI, life satisfaction, perceived stress, somatic complaints, and relationship quality at three time points: before, 1 month after, and 1 year after the program. In addition to participants' self-reports at each time point, the researchers also collected cortisol levels as an objective measure of stress and informant ratings of trait EI and relationship quality from a close friend or spouse. The results of this controlled study showed that the level of trait EI (both self-reported and informant rated) increased significantly in the intervention versus control group, and this increase in trait EI was accompanied by decreases in somatic complaints and stress (both perceived and objective), as well as increases in relationship quality (both self-reported and informant rated). Of importance is that these gains in personal and interpersonal functioning persisted for 1 year after the intervention.

Does improving EI through training enhance career readiness? Further research by Nelis et al. (2011) evaluated the effectiveness of an 18-h EI training program for undergraduate students, designed to teach and practice the four core EI competencies outlined in Mayer and Salovey's (1997) EI model. The training program consisted of either three 6-h sessions (a session on each of two consecutive days and the last session 2 weeks later) or six 3-h sessions (one session per week for 6 weeks). Students in the EI intervention group, a non-EI training comparison group, and a non-training control group completed self-report measures of trait EI, emotion regulation, psychopathological symptoms, somatic complaints, happiness, life satisfaction, and overall relationship quality at two time points: before and 6 weeks after the program. In addition to participants' self-reports at each time point, the researchers also conducted a behavioral assessment of employability, operationalized as the probability of being hired by a future employer based on evaluations of participants' mock job interviews by a panel of human resources professionals. The results of this controlled study showed that the EI training group (but not the two comparison groups) significantly improved in trait EI and emotion regulation, which was accompanied by significant improvements in employability and all other measured outcomes. These results indicate that improvements in trait EI indeed translate into a real-life employability advantage.

In the Italian context, a preventive strength-based training program designed to enhance EI among Italian high school students was developed by Di Fabio (2010); Di Fabio and Kenny (2011). This 10-h program was delivered in four weekly sessions of 2.5 h each. Each session focused on one of the four dimensions of Mayer and Salovey's (1997) EI model: emotion appraisal, emotion facilitation of thinking, emotion understanding, and emotion regulation. Di Fabio and Kenny (2011) then carried out a controlled study to evaluate the effectiveness of their EI training program. Students in the intervention group and a non-training control group completed measures of ability EI (the MSCEIT), trait EI (the AES), career decision-making difficulties, and trait indecisiveness at two time points: before and 1 month after the program. The results showed that EI training led to significant increases in all four EI abilities targeted by the program, as well as in trait EI, for students in the intervention versus control group. These gains in EI were accompanied by decreases in indecisiveness and in career decision-making difficulties, suggesting that enhancing ability and trait EI can indeed facilitate the career decision-making process.

Chapter 14 in this book by Vesely-Maillefer and Saklofske (this volume; see also Vesely et al., 2014) provides a detailed description of the effects of an EI training program for pre-service teachers in Canada, which resulted in significant improvements in trait EI as well as enhanced sense of job-related efficacy.

Overall, the results of these controlled evaluation studies indicate that relatively short (10–22 h of training) interventions specifically developed to enhance EI among adolescents and young adults can increase not only participants' socio-emotional competencies, which are considered to be valuable twenty-first-century skills in their own right, but also boost career readiness in terms of improved

career decision-making and employability. These effects appear to last for several months beyond the intervention – a period that is sufficient to produce tangible employment results.

Implications for Career Counselors and Educators

While requiring more research, these results have implications for career counselors and educators. There is now sufficient preliminary research base showing that EI can be developed and increased through theory-driven EI programs that produce replicable results. Furthermore, improvements in EI appear to have positive effects, either directly or indirectly, in enhancing career decision-making processes and employability of young people, which would have even further implications across the lifespan (Commons, 2002; Di Fabio, 2014a; Helson & Srivastava, 2001). From a developmental perspective (Lerner, 2001; Lerner et al., 2005), the importance of developing school-based programs that promote social and emotional growth can also be seen to have implications in supporting academic and career success (Belfield et al., 2015; Di Fabio et al., 2014; Walsh, Galassi, Murphy, & Park-Taylor, 2002). Thus, EI and career readiness might be said to go hand in hand, just as career readiness is related to personal well-being (American College Health Association, 2004; Fouad et al., 2006; Kenny, Blustein, Haase, Jackson, & Perry, 2006; Kenny, Walsh-Blair, Blustein, Bempechat, & Seltzer, 2010; Multon, Heppner, Gysbers, Zook, & Ellis-Kalton, 2001) across the lifespan (Commons, 2002; Di Fabio, 2014a; Guichard, 2013; Helson & Srivastava, 2001). Our message at this point in time would be to encourage career counselors and educators to further capitalize on the role of EI in enhancing the well-being of their students, which in turn would include its relationship to career decisions in the short and longer term (Di Fabio, Bernaud, & Loarer, 2014; Di Fabio & Kenny, 2011, 2016b).

At a primary prevention level, the research literature has demonstrated that it is possible to develop and apply interventions to enhance EI in children, adolescents, and adults. At a secondary prevention level, screening to determine EI capabilities with early specific training could also be focused on enhancing career readiness. At a tertiary prevention level, areas of EI and career readiness that require intervention with specific training programs and career counseling could be enacted as identified in carefully conducted assessments (Di Fabio & Kenny, 2011; Di Fabio et al., 2016). This further raises the necessity for career counselors and educators to have EI-related professional training, because they are the professionals who have the greatest opportunity to promote EI and other personal resources and to enhance positive development of their students (Di Fabio, Bernaud, & Loarer, 2014; Lerner et al., 2005). Of course, this would then be expected to transfer to adulthood, with the anticipated outcome that more of today's young people will be able to participate productively in society (Di Fabio et al., 2014, 2016; Lerner, 2001).

Individual resources and strengths such as EI are considered to be protective factors in positive youth development (Catalano, Berglund, Ryan, Lonczak, &

Hawkins, 2004; Colby & Damon, 1992; Commons, 2002; Helson & Srivastava, 2001; Kozan, Di Fabio, Blustein, & Kenny, 2014; Lerner et al., 2005). In this framework of positive strengths promotion, a new model, Positive Self and Relational Management (PS&RM; Di Fabio & Kenny, 2016a), was developed as an answer to the complex work and life challenges of the twenty-first century (Blustein, 2011; Di Fabio, 2014a, 2015a; Guichard, 2004; Savickas, 2011). Accordingly, PS&RM refers to “the development of individuals’ strengths, potentials and varied talents, from the lifespan perspective and the positive dialectic of the self in relationship” (Di Fabio, 2014a). It promotes self and relational management across different personal and professional transitions and favors the reaching of identitarian purposeful awareness and realization of the authentic self of individual (Di Fabio, 2014d).

The PS&RM model is defined by three constructs: Positive Lifelong Life Management, Positive Lifelong Self-Management, and Positive Lifelong Relational Management. The first construct, Positive Lifelong Life Management, is operationalized by the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988) and the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) as measures of hedonic well-being and by the Meaningful Life Measure (Morgan & Farsides, 2009) and the Authenticity Scale (Wood, Linley, Maltby, Baliousis, & Joseph, 2008) as measures of eudaimonic well-being. The second construct, Positive Lifelong Self-Management, encompasses individual-level resources, self-insight, and coping in the workplace; it is operationalized by the Intrapreneurial Self-Capital Scale (Di Fabio, 2014b), the Career Adapt-Abilities Inventory (Savickas & Porfeli, 2012), and the Life Project Reflexivity Scale (Di Fabio, 2015b). The third construct, Positive Lifelong Relational Management, includes resources for relational adaptation in and outside the workplace; it is operationalized by the TEIQue (Petrides, 2009), the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988), and the Positive Relational Management Scale (Di Fabio, 2016). In the PS&RM model, the role of trait EI emerges in Positive Lifelong Relational Management, as a core component of career readiness. With its emphasis on building individual and relational strengths, the PS&RM model offers a useful assessment and preventive intervention framework for promoting career readiness and adaptability in today’s youth.

Conclusions and Future Directions

The present chapter reviewed research literature linking EI to career readiness in terms of career decision variables, including career decision-making difficulties, decision-making styles, and career decision-making self-efficacy, and employability. While the research studies reviewed here provide encouraging support particularly for the role of trait EI, it is advisable to expand research on this topic by exploring different areas of career readiness, including lifelong career decision-making in longitudinal research designs, and potential variations across cultural contexts. Except for the handful of intervention studies reviewed in the last section, most studies covered in this chapter were cross-sectional, carried out in the Italian context, and only few simultaneously considered different

models and operationalizations of EI. Thus, in future research, it is important to explore more thoroughly different models of EI (both trait and ability-based) in relation to long-term career readiness and other career-related outcomes.

Where does EI fit within the broader network of variables known to promote career readiness of young people in the twenty-first century? Within the PS&RM model, for example, trait EI is included as an index of Positive Lifelong Relational Management. In addition, trait EI has been empirically linked to Positive Lifelong Self-Management through its connection to Intrapreneurial Self-Capital (ISC; Di Fabio, 2014b). ISC is defined as “the positive self-evaluation of the self-concept characterized by one’s own ability to be committed, to identify significant objectives, to feel in control over life events, to creatively solve problems, to change constraints into resources, to develop one’s own skills, to apply decision-making skills to every aspect of life, and to make decisions carefully and rationally (Di Fabio, 2014b, p. 100). ISC is a higher-order composite construct that represents core personal attributes – core self-evaluation, hardiness, creative self-efficacy, resilience, goal mastery, decisiveness, and vigilance – that allow an individual to deal successfully with the changes, challenges, and demands of today’s world of work. The evidence reviewed in this chapter suggests that trait EI can be confidently added as another link in this chain of career-building personal strengths.

Regarding training to enhance and promote the development of EI, which shows promise for positively impacting career readiness, it is important to continue research to examine the robustness of intervention effects in different samples and in different international contexts. It is also advisable to expand the research verifying if training specifically developed to improve EI can also positively impact other career decision-making variables such as career decision-making self-efficacy, decision-making styles, and other components of ISC. Results presented throughout this and other chapters in this book (e.g., Chap. 12 by Elias, Nayman, & Duffell, this volume; Chap. 7 by Hoffmann, Ivcevic, & Brackett, this volume; Chap. 14 by Vesely-Maillefer & Saklofske, this volume) support the view that career counselors and educators should receive training in EI and program implementation, since they are in a key position to promote EI development in their students throughout the years of formal education, which certainly also includes career readiness.

Although more research is still needed, the review of the studies presented in this chapter on the relations of EI with career readiness underlines the role of this promising variable for positive youth development (Kenny, 2007; Di Fabio et al., 2014; Lerner, 2001) and for positive life construction and career management in general (Commons, 2002; Di Fabio, 2014a; Guichard, 2013; Helson & Srivastava, 2001). EI can be increased through specific training (Di Fabio & Kenny, 2011; Kotsou et al., 2011; Nelis et al., 2009, 2011; Vesely et al., 2014), opening new perspectives for primary, secondary, and tertiary prevention-intervention programs (Caplan, 1964; Hage et al., 2007). Having a role in career readiness, EI could similarly play a role in the promotion of career management process and success in the workplace, as well as in life in general (Di Fabio, 2014d; Di Fabio & Bernaud, 2014; Di Fabio, Bernaud, & Loarer, 2014; Di Fabio & Maree, 2013; Di Fabio & Palazzeschi, 2012; Di Fabio & Saklofske, 2014a, 2014b; Guichard, 2013; Guichard & Di Fabio, 2010; Maree, 2015; Savickas, 2011, 2013; Zysberg, Levy, & Zisberg, 2011).

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Chapter 14

Emotional Intelligence and the Next Generation of Teachers



Ashley K. Vesely-Maillefer and Donald H. Saklofske

Abstract High stress levels and rising rates of burnout within the teaching occupation call for novel means of improving teacher stress management and well-being, which are key to effective teaching and student success. Growing evidence indicates that developing emotional intelligence (EI) through training can positively impact a wide range of psychological outcomes, leading to improved health and well-being, and would appear to have direct application to supporting teacher wellness. This chapter reviews a program of research on EI training delivered to several groups of preservice teachers with the purpose of both enhancing EI competencies and reducing the stresses associated with teaching. Each phase of the training added and improved upon the initial program, ensured program fidelity, and assessed a range of outcomes. Outcome evaluation studies indicated that participants' trait EI increased at post-program and at 1- and 6-month follow-ups compared to control participants who did not receive the EI training. Further, the program participants' stress indicators decreased alongside an increase in adaptive coping, resiliency, and teacher efficacy. Ultimately, EI training is aimed at preventing teacher burnout by building the capacity to manage the everyday challenges of the classroom. Such empirically based EI programs are recommended as a direct and systemic component of professional development for teachers prior to and throughout their teaching careers.

The research literature continues to report both new and replicated findings demonstrating that emotional intelligence (EI) is related to a number of personal and performance life factors related to psychological health and well-being. These findings have been reported in a wide range of groups and populations including school principals (Davids, 2016), accountants (Galley & Heilmann, 2016), and sport

A. K. Vesely-Maillefer
University of Lausanne, Lausanne, Switzerland

D. H. Saklofske (✉)
Department of Psychology, University of Western Ontario, London, ON, Canada
e-mail: dsaklofs@uwo.ca

coaches (Lee & Chelladurai, 2016), as well as, for example, in the broad areas of leadership (Caruso, Fleming, & Spector, 2014; George, 2000), educational achievement (Bar-On, 2004; Schutte et al., 1998, 2007; Slaski & Cartwright, 2002; Zeidner, Matthews, & Roberts, 2012), and workplace flourishing and performance (Di Fabio & Saklofske, 2014; Schutte & Loi, 2014; Wan, Downey, & Stough, 2014). There is also convergence that EI is related to 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), motivation (Christie, Jordan, Troth, & Lawrence, 2007), and various clinical disorders (e.g., Hansen, Lloyd, & Stough, 2009). The robust results of EI's associations with positive outcomes are further complimented by the demonstration that EI can be developed through the use of specific programs (Ciarrochi & Mayer, 2013). This raises the encouraging possibility that EI programs can be created and applied in various settings to enhance personal and professional development.

Current research on school-based mental health has largely focused on children and adolescents (see Leschied, Flett, & Saklofske, 2013), aimed at addressing a broad range of issues from student achievement and retention to psychological thriving. It is well known and supported by research that it is the teacher who plays a central and strategic role in making schools “come alive” for students (Corbett & Wilson, 2002; Gujarati, 2012). An attractive building, a cutting-edge curriculum, or a resource-rich school is “inanimate” without the teacher guiding, supporting, and encouraging students in ways that positively impact both their cognitive and social-emotional development (Phelps & Benson, 2012). At the same time, there is a large literature that describes teaching as one of the most stressful and challenging occupations (Chang, 2009; Kinman, Wray, & Strange, 2011; Kokkinos, 2007; Pillay, Goddard, & Wilss, 2005). This is not due to any one cause or condition but can be the result of multiple stressors ranging from long hours, classroom management demands, the responsibility for ensuring children's learning, external demands from parents, the pressures from the educational bureaucracy, or the small everyday pedagogical and student social-emotional requirements of the classroom (Droogenbroeck & Spruyt, 2015; Katz, Greenberg, Jennings, & Klein, 2016). Thus, there are a host of demands, stresses, and strains that go hand in hand with the teaching profession, all of which have the potential to adversely impact teachers' capacity as effective educators and their health and well-being, which cumulatively can lead to emotional exhaustion described as burnout (Carpenter, 2014; Maslach, Schaufeli, & Leiter, 2001; Schaufeli, Leiter, & Maslach, 2009). In turn, survey data are unanimous in their findings that too many teachers leave the profession (Carroll, 2007; Carroll & Foster, 2010; Watlington, Shockley, Guglielmino, & Felsher, 2010) after only several years of teaching and at least 50% over the span of a normal career (Ingersoll, 2001, 2012). The loss to the economy but also to the education enterprise, as trained teachers leave teaching or become physical and psychological health “casualties,” is too great by any standard.

From these findings comes the obvious recommendation: there is a great need to further support teachers both professionally and also personally, so they may competently manage the critically important role of creating a psychologically healthy,

learning-, and student-centered classroom. Given the considerable research supporting the significant influence of effective teachers on desirable student outcomes (e.g., Jennings & Greenberg, 2009; McIntyre & Battle, 1998; Murphy, Delli, & Edwards, 2004; Yoon, 2002), the psychological health of teachers is imperative for its own sake and for the success of students, the education system, and, ultimately, the society. It is at this point that we turn to an examination of EI and its role in supporting the psychological health and professional demands of teachers. Following a brief review of the research literature, we will present data from our multiple studies reporting on the outcomes of an EI program for preservice teachers.

It is generally agreed that the foundational underpinnings of EI can be partially attributed to the earlier writings of psychologists such as Carl Rogers (1953) and descriptions of intelligence such as Thorndike's (1920) view of social intelligence and later Gardner's (1983) multiple intelligences that included both interpersonal and intrapersonal intelligences. However, it was likely the paper by Salovey and Mayer (1990) that brought the term "emotional intelligence" to the fore, followed by Goleman's (1995) popularization of the construct, which has led to almost three decades of research and, more recently, the application of EI to such fields as education, sports, work, leadership, and health. Presently, there are multiple perspectives on the theoretical structure of EI as well as whether it is an ability more akin to IQ (Mayer, Salovey, Caruso, & Sitarenios, 2001; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume) or an aspect of personality (Petrides & Furnham, 2000; see also Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). This heterogeneity is also reflected in the multiple methods of assessing EI (see Stough, Saklofske, & Parker, 2009). This chapter is not intended to review the general theoretical framework of EI, including the ability-trait distinction, research on the structure of EI, nor its measurement. As well, critiques of EI have been competently presented by others (e.g., Matthews, Zeidner, & Roberts, 2004; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume; Chap. 5 by Huynh, Oakes, & Grossmann, this volume) and will not be described here. For purposes of this chapter, EI will from this point on refer mainly to trait EI, (unless otherwise specified), which is conceptualized as a dispositional trait or, depending on the measure, emotional self-efficacy.

The following pages of this chapter will review the recent literature on EI in the context of teaching, beginning with the recognition that while teacher stress and excessive job demands are related to stress and burnout in all of its manifestations (e.g., absenteeism, physical complaints, decreased psychological health, leaving the profession), higher EI shows the opposite relationship (Mérida-López & Extremera, 2017; Zysberg, Orenshtein, Gimmon, & Robinson, 2017). This is followed by a description of training programs that would appear to have the potential to be beneficial in teachers' personal and professional development. Recognizing that teaching is a job of high "emotional labor" (Brennan, 2006) and involves high levels of occupational stress (e.g., Chang, 2009; Kokkinos, 2007) resulting in a host of negative outcomes (Carroll, 2007; Carroll & Foster, 2010; Chan, 2006), the need for a school and educational system that provides the psychological supports for teachers, as well as the ensuing

benefits of EI training as a means of this support, will be outlined. As will be pointed out in the research reported in the second part of this chapter, introducing EI into the curriculum of teacher training programs, following from the work of Meichenbaum on stress inoculation (Jaremko & Meichenbaum, 2013), seems to be an intuitive next step.

Teachers, Stress, and the Increasing Demands

The significant direct and indirect contributions made by teachers to student learning, achievement, and personal-social development are irrefutable (McIntyre & Battle, 1998; Murphy et al., 2004; Phelps & Benson, 2012; see also Chap. 6 by Denham & Bassett, this volume). The major positive influence that teachers can have on a wide range of student factors is often in competition with the known emotional effort and strains of teaching in contemporary society. We place such high value on teachers' influence yet often fail to recognize the pressure and burden they must endure in order to have the best possible impact on the generations to come. Individuals within the teaching profession continue to be vulnerable to the high levels of occupational stress (e.g., Chang, 2009; Hakanen, Bakker, & Schaufeli, 2006; Kokkinos, 2007; Maslach, 1999; Pillay et al., 2005), and the demands are increasing with increasing class sizes, greater cultural diversity, and individual student needs following from the inclusion movement over the past several decades (Maslach et al., 2001; McCarthy, Lambert, O'Donnell, & Melendres, 2009). However, teaching today goes well beyond the old view of "imparting a curriculum to passive learners" but now demands a dynamic and interactive classroom that involves much more than the 3Rs (reading, writing, and arithmetic) with a focus on students' personal, social, and emotional growth. Such professional and personal demands and the resulting cost to teacher's mental and physical health are certainly key factors in up to 50% of teachers leaving the profession within the first 5 years of teaching (Chang, 2009; Ingersoll, 2001, 2012).

The view that teachers are resilient and able to "naturally" manage stress effectively has certainly been challenged (Austin, Shah, & Muncer, 2005). The large literature on resiliency generated in recent years shows that it is in large part "ordinary magic" of human development enabled by supportive social environments (Masten, 2001; Masten & Labella, 2016). While temperament and personality are certainly linked with resiliency factors ranging from mastery to emotional reactivity (Prince-Embury & Saklofske, 2013, 2014), there is compelling evidence that resiliency can be developed and enhanced with opportunity and both training and education. So while the links between teaching, stress, decreased job satisfaction, and burnout have been replicated in a number of research studies (Brackett, Palomera, Mojsa-Kaja, Reyes, & Salovey, 2010; Carpenter, 2014; Jennings & Greenberg, 2009; Lens & de Jesus, 1999), there are a range of factors that are known to lead to burnout, which include having a dearth of both personal and professional support resources needed to sustain the intellectual and emotional demands required for teaching (Chang & Davis, 2009; Lens & de Jesus, 1999). While we do not underestimate the

significance of organizational and work environmental factors underlying teacher stress versus well-being, the need to enhance one's individual resources and capacity goes hand in hand with actively engaging in a healthy lifestyle to complement the creation of healthy environments. Thus, we turn now to building psychological capacity that will add to the teachers' foundation of resources when faced with demanding classrooms and environments that, at times, can produce toxic stress. If we think of all the demands of the everyday classroom besides the need for a knowledge of curriculum and teaching methods, it is the skills related to the self (self-concept, self-esteem, and self-efficacy), such as coping skills, stress management, adaptability, as well as those which allow for the effective interaction and management of others – emotion-based skills – that would appear most promising for promoting resilience and enhancing the psychological well-being of teachers.

EI and Teacher Stress

The link between higher EI and reduced teacher stress, increased teacher well-being, and greater teacher efficacy has been identified as an important connection. This link potentially accounts for some of the differences between those teachers who are able to identify and view stressors as challenges which they feel empowered to tackle, rather than feeling overwhelmed and defeated by these same stressors (Mikolajczak & Luminet, 2008; Vesely, Saklofske, & Leschied, 2013). The extent to which teachers can access and utilize personal resources and external supports will add to their ability to cope with the myriad of demands. Much of the research identifying the effects of stress in teaching has also referred to the construct of teacher efficacy. Teacher efficacy may be viewed as the extent to which teachers perceive themselves to be effective and to be able to make a positive difference in the classroom (Tschannen-Moran & Woolfolk Hoy, 2001), thus indirectly describing not only perceived abilities and resources (internal and external) but also access to and application of these abilities and resources. Research shows that when teachers are less well adjusted and highly stressed, this can, in turn, negatively affect the classroom climate, the well-being of students, and teachers' overall capacity to be effective in their many roles (Chan, 2006). Though difficult to define, the use of teacher efficacy as an outcome variable has driven a good portion of the literature related to teachers' school stress levels and is one of the most widely cited variables linked to outcomes in the classroom (Muijs & Reynolds, 2015; Skaalvik & Skaalvik, 2010; Woolfolk Hoy & Davis, 2006).

To add to the potential of EI in relation to promoting teacher well-being, the literature continues to grow, showing a positive relationship between trait EI and a large number of self-reported factors including resiliency, satisfaction with life, and flourishing while correlating negatively with a large number of self-reported measures including neuroticism, anxiety, depression, and stress (see Petrides, Siegling, & Saklofske, 2016). The notion of EI skills training would thus appear to be a plausible means of reducing the stressors of teachers and supporting their psychological and physical health and well-being.

EI Training as a Potential Solution

The Positive Impact of EI

Recent literature has turned to EI training for providing teachers with a means of building coping resources and preventing and/or dealing with the stress that comes with the profession (see Vesely-Maillefer, 2015). This has developed from previous research in various domains of study in which higher EI was first linked with a wide range of positive life outcomes (see evidence reviewed above). Studies have established EI to be a valuable construct with a wide range of evidence to support its contribution to behavior and performance.

As the importance and utility of the EI construct becomes more evident and despite the heterogeneity of its definitions and measurements, the authors of this chapter have written emphatically on the evidence for the connection between EI and its benefits in teaching (Vesely et al., 2013). The evidence continues to accumulate supporting that higher levels of EI can modulate stress escalation and improve its management (Chan, 2006; Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012), that EI can help facilitate effective teaching (Perry & Ball, 2005), that EI skills overlap with and may contribute to or underlie a large portion of the positive factors comprising teacher efficacy (Vesely et al., 2013), and that EI can be developed through specific EI program training (Dacre-Pool & Qualter, 2012; Gardner, 2005; Nelis et al., 2011; Nelis, Quoidbach, Mikolajczak, & Hansenne, 2009; Slaski & Cartwright, 2003). As noted above, some of the main variables seen when making this connection are the constructs of teacher efficacy and teacher stress and well-being. Vesely et al. (2013) have outlined the role of EI in the promotion of personal well-being, adding to the literature highlighting conceptual differences between individuals with varying levels of emotional management, stress tolerance, and classroom outcomes (e.g., Brackett et al., 2010; Brackett, Rivers, & Salovey, 2011; Jennings & Greenberg, 2009).

EI Development

The extent to which EI can be learned and taught has been debated in relation to both ability and trait EI (Humphrey, Curran, Morris, Farrell, & Woods, 2007). While trait EI may diverge somewhat from the ability EI perspective (see Petrides et al., 2016), there is a general consensus that EI is a malleable construct. The research literature has shown that some EI competencies can be learned or enhanced through training (Gardner, 2005; Nelis et al., 2011; Vesely, Saklofske, & Nordstokke, 2014). A wide array of programs have been successful in improving not only EI skills as measured using both self-report and performance-based measures but also those outcomes that one would expect to see if emotion-based skills improve, such as organizational commitment, job satisfaction, coping, and occupational stress (Gardner, 2006; Vesely et al., 2013). These types of outcomes have been seen in a wide variety of populations (Hansen et al., 2009; Parker, Hogan, Eastabrook, Oke, & Wood, 2006;

Slaski & Cartwright, 2003), using an array of different developmental EI programs, and a large range of content, differential requirements (e.g., homework, discussion), and length and duration of program (Kotsou, Mikolajczak, Grégoire, Heeren, & Leys, [under review](#)), reviewed below.

The earlier debate around EI malleability has moved from the question about *whether* one could generally teach people emotional skills to the more recent emphasis on the extent to which the supposed learned skills, reflected in EI score changes, actually can be applied and used in everyday life. The difficulties defining and measuring EI (trait versus ability) have also highlighted the difference between emotion knowledge and the application of this knowledge (Fiori et al., 2014; Fiori & Ortony, 2014). Self-report measures are more vulnerable to faking/social desirability, misinterpretation of one's emotional effectiveness, and ecological validity (Grubb III & McDaniel, 2007; Roberts, Zeidner, & Matthews, 2007). In contrast, high scores on performance-based EI measures do not necessarily result in enhanced performance in a naturalistic setting but merely represent knowledge about how to problem-solve emotionally based scenarios. This has led researchers to question the mechanisms through which EI skills are learned and to ask what is necessary to include in training that will result in skill acquisition and application. The following sections will emphasize the need for such training by, first, briefly reviewing empirically supported training programs. Research on a specific EI training program carried out by the authors with student teachers will then be outlined, demonstrating the positive impact of such programs on teacher health and well-being outcomes.

Professional Development Aimed at Teachers

Psychologists have been increasingly active in promoting a positive approach to wellness that is based on both prevention and acquiring those skills that are key to promoting well-being. In many ways, this is akin to what schools have always been mandated to do: to prepare their students with the knowledge and skills needed to address the many tasks and challenges they will face in life. Skills training is core to a wide range of human needs and interactions; for example, counseling can greatly enhance one's capacity to more effectively communicate or manage conflict situations. Achievement in areas such as physical health and sport psychology also effectively illustrate the importance of teaching both skills (e.g., more efficient warm-up exercises to prevent injury, body shifting in martial arts or basketball) and also the internalization of this way of life (e.g., consistent training, healthy eating, mental rehearsal in preparation for a long-distance cycling event). This is very much the underlying basis to programs designed to build and increase EI; it is more than teaching specific knowledge and techniques (i.e., ability EI) but involves integrating the understanding, use, and management of emotions into one's everyday life and lifestyle as a disposition (i.e., trait EI).

Many professional teacher development programs have focused mainly on strengthening content knowledge or enhancing pedagogical and instructional skills.

Though this is necessary, it is now recognized that the psychological health of teachers is equally as important, something that has been seen through the development and implementation of many added program components aimed at reducing teacher stress and improving their well-being (Emmer & Stough, 2001; Zuercher, Kessler, & Yoshioka, 2011). Components of coping, classroom management, and/or stress management (Austin et al., 2005; Howard & Johnson, 2004), integrated into professional development (though not often mandatory in teacher education), frequently overlap with EI training programs and have been shown to be effective. Vesely et al. (2013) list a range of programs, such as Rational Emotive Education (corresponding to Rational Emotive Behavior Therapy; Maag, 2008; Nucci, 2002), the Caring School Community (Solomon, Watson, Delucchi, Schaps, & Battistich, 1988), and Promoting Alternative Thinking Strategies (PATHS; Kusche & Greenberg, 1994), each of which has a component of either classroom or stress management overlapping with the skill learning commonly taught in EI programs (see also Lipnevich, Preckel, & Roberts, 2016; Chap. 10 by Montgomery, McCrimmon, Climmie, & Ward, this volume).

EI Training Programs: Enhancing EI¹

Looking more directly at the evidence that EI can be developed through EI program training, research programs have provided empirical support that training can improve skills required for emotional competencies. The focus here will be on EI enhancement studies in general that will then be further described in relation to teachers, especially during the teacher preparation period. A variety of programs aimed at improving EI skills in its participants have been developed and most often evaluated using trait EI measures. A review of published studies (46 studies) suggests that the majority of those assessing trait EI at the conclusion of the training programs have indicated positive results (90%), namely, that there was an increase in EI self-perceptions after program completion (Kotsou et al., [under review](#); Mikolajczak, 2015). However, of the nine studies reviewed that utilized an ability EI measure to assess posttreatment outcomes, the majority did not show significant sustained improvement (Kotsou et al., [under review](#)). Furthermore, it should also be noted that while EI was assessed as an outcome variable in these studies, not all programs were in fact specifically targeted at developing EI.

These numerous studies reviewed by Kotsou et al. ([under review](#)), though indicative of the positive impact of EI training overall and on a wide range of outcomes, also highlight some significant limitations. In addition to the use of different measures to assess EI improvement, further issues included no or non-active control groups, a lack of follow-up to measure longer-term changes (with some measuring EI only immediately after the program and the majority – at less than 6 months), and failure to utilize

¹Parts of this section are from Vesely-Maillefer (2015), unpublished dissertation, University of Western Ontario.

theory and/or evidence-based training modules (with some teaching non-specific EI skills and others failing to include a description of the program entirely).

It is important to state that the review by Kotsou et al. ([under review](#)) also identified some studies that were less plagued by these same methodological limitations (Karahana & Yalcin, 2009; Kotsou, Nelis, Gregoire, & Mikolajczak, 2011; Nelis et al., 2009, 2011; Sharif, Rezaie, Keshavarzi, Mansoori, & Ghadakpoor, 2013; Slaski & Cartwright, 2003; Vesely et al., 2014; Yalcin, Karahan, Ozcelik, & Igde, 2008). Those programs, primarily based on trait EI models, were noted to show variability in the length of training and spanned different time periods from a 2-day workshop to 12-week training, however, included at least two of the three EI dimensions of identification, expression, or regulation of emotions (Mikolajczak, 2015). However, most of these evaluated programs were designed around five EI dimensions that included identification, understanding, use, expression, and regulation of emotions (Mikolajczak, 2015), with some programs including up to seven dimensions (Vesely et al., 2014) or incorporating theory around other emotional competencies such as detachment (Slaski & Cartwright, 2003). Most programs include a psychoeducational or teaching component of EI theory and techniques, in addition to experiential teaching methods such as discussions, activities, role-play, and self-reflection. Most encouraging is that in general, these programs showed an average trait EI improvement of 12.4% (measured by the TEIQue or EQ-i; Mikolajczak, 2015), indicating that the possibility of improving trait EI through training remains quite viable.

Of the two studies that utilized a teacher population, one evaluated the development of emotional competencies in primary school teachers (Pérez-Escoda, Filella, Alegre, & Bisquerra, 2012). This study administered 1 h a week of training for 30 weeks, which focused on emotional awareness, emotion regulation, personal autonomy, social competence, and life competencies. The results showed an increase in participants' self-reported trait EI, as well as a decrease in stress and an improvement in relational climate in schools, relative to a control group. The second study on teachers examined EI training administered across 14 weeks (56 h) and showed an increase in self-reported trait EI and empathic concern (Hen & Sharabi-Nov, 2014) upon program completion; however, this study did not have a control group.

In terms of other programs utilizing ability EI as an outcome variable, these have been studied more often within the educational literature. Such programs tend to be less focused on teaching the components related to specific EI skills but rather focused on professional development or more general promotion of emotional skills in teachers and students. For instance, evaluations of programs aimed at helping teachers implement social-emotional programs, such as the Nurturing Peace in Early Childhood (Kaplan, 2002), have used ability EI as an outcome variable. These programs do include facets that comprise EI (in this case, facets such as perceiving, using, understanding, and managing emotions) but are aimed at more general purposes, without training exactly these skills. On the other hand, a number of EI-specific programs, such as mindfulness-based EI training (Ciarrochi, Blackledge, Bilich, & Bayliss, 2007), have used the ability EI model as their basis for training development and also used ability EI outcome measures to assess program impact

(Boyatzis, 2007; Cherniss & Adler, 2000; Kornacki & Caruso, 2007), showing positive changes from pre- to post-training. Other programs for teachers and students coming from this EI ability model also include the Emotionally Intelligent Teacher based on the Mayer, Salovey, and Caruso (2002) model and the RULER (recognizing, understanding, labeling, expressing, and regulating emotions) program, a school-based EI intervention program (Brackett et al., 2011; see also Chap. 7 by Hoffmann, Ivcevic, & Brackett, this volume), each of which has shown a range of positive outcomes.

Programs being assessed and evaluated with ability EI measures come with their own set of limitations. One major limitation is the difficulty with currently available performance-based assessments. Not only do these measures (e.g., the Mayer-Salovey-Caruso Emotional Intelligence Test) fall short in identifying individuals who are skilled beyond a normative level (Fiori et al., 2014), but they also mainly assess emotion knowledge and fail to take into account the application of this knowledge (Fiori & Antonakis, 2011; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume). Though these measures may be picking up on some valid individual differences, it is difficult to identify their true impact in the everyday life of individuals. There is, of course, also one main criticism of trait EI measures used in intervention and prevention programs: they tend to focus on what the person thinks, feels, or says they do rather than what the person actually does. However, we do know that emotional self-perceptions have been shown to have an impact on objective behavior (Keefer, 2015). Therefore, in addition to changes in EI (ability or trait), program evaluation studies also need to measure changes in the ultimate outcomes the EI training was designed to redress.

The following sections will describe a series of studies completed by the authors that illustrate both the content and the outcomes of a specific EI program for student teachers that takes into account the methodological limitations outlined above.

EI Program for Preservice Teachers: An Illustration

Theoretical Model

The program we used and modified in our program of research is based on the Swinburne model titled “Managing Stress through Developing Emotional Intelligence: A Professional Development Program for Teachers” (Gardner, Stough, & Hansen, 2008). While this program has implications for use in other settings and with other professions, the particular version used here was designed specifically for teachers with modifications for preservice teachers (i.e., students in teacher education university programs). The ultimate goal was to decrease teacher stress and potential burnout while improving overall teacher well-being and sense of teacher efficacy and classroom effectiveness. Preliminary evaluations of this program have shown it to yield positive changes in self-reported EI scores (Gardner, 2005; Poole & Saklofske, 2009); it has also shown empirical support in relation to improving

workplace climate, job satisfaction, and occupational performance (Gardner & Stough, 2002). Again, the primary reasons why we adopted this specific program include its specific tailoring to teachers while being based on a robust EI model that has shown promising results in earlier studies. Further, parallel self-report measures of trait EI (the Genos Emotional Intelligence Test) have been argued to provide high utility in workplace applications, such as in relation to desired performance outcomes (Palmer, 2007).

The Genos model is categorized under the trait EI framework and was developed in the context of workplace management (Gignac, 2008; Palmer & Stough, 2001). It encompasses seven EI dimensions, which together describe the individual's self-perceptions of his or her emotional competencies. These include (a) identification of personal feelings and emotional states (self-awareness), (b) expression of those inner feelings to others (expression), (c) identification and understanding of the emotions of others (awareness of others), (d) incorporation of emotions and emotional knowledge into decision-making and/or problem-solving (reasoning), (e) management of one's own positive and negative emotions (self-management), (f) management of the emotions of others, and (g) effective control of the emotional states that are experienced, such as anger, stress, and frustration (self-control) (Gignac, 2008). This theoretical model has a corresponding self-report scale, the Genos Emotional Intelligence Test (Genos; Gignac, 2008), which measures each of the seven factors. The scale provides scores of typical performance of the relative frequency that individuals engage in emotionally intelligent behaviors. Details of the program and the activities, specific skills, and teaching topics are discussed below.

It is important to state that even though the Genos is described within the trait EI framework, this is so due to its operationalization with the self-report measure. In contrast, the Genos model does not particularly hold to the theoretical assumption of trait EI as a relatively stable disposition similar to that described by personality researchers for major personality factors. In this instance, it would be more appropriate to use the term EI competence, as described by Mikolajczak (2009), which emphasizes the expectation of EI malleability as a result of experience and training.

Basic Program Description

The general focus of our program was on the development of skills related to each of the seven factors of the Genos model. Five weekly group sessions were drawn from the original program and were on average 2 h in length, but complementary outside tasks, exercises, and reviews were also encouraged. While the program underwent some modifications over the several phases of its evaluation research (see Fig. 14.1), the common elements for the five sessions employed a workshop format that involved the following components: psychoeducation (didactic learning), education and demonstration of specific skills, scenario discussions, group activities, homework, self-reflection, worksheets, and goal-setting exercises. The first session was intended as a broad overview that provided an introduction to the

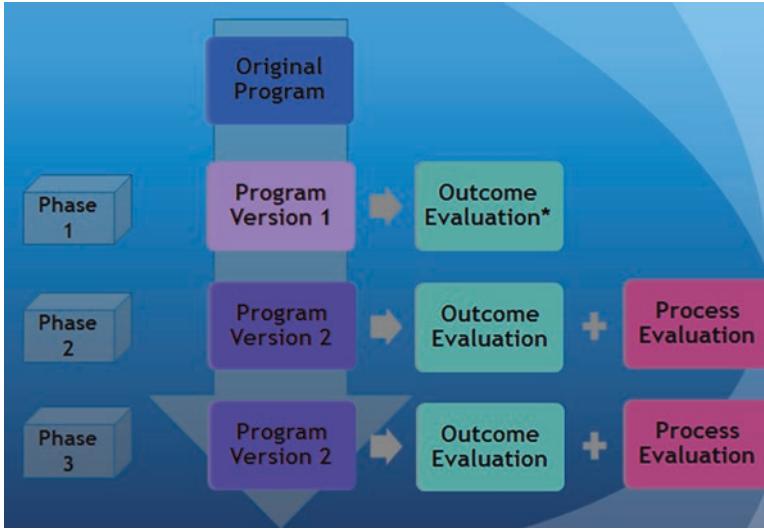


Fig. 14.1 Phases of data collection

program, an overview of occupational stress, and a description of the conceptual and empirical links between stress and the EI facets. Session two presented an overview of the EI model followed by the Genos assessment and review of each participant's EI profile. Sessions three to five went into detail regarding the development of each of the seven EI competencies. The program ended with a summary of the program and EI competencies and recommendations for continuing to move forward. Each content area was made specifically applicable to teachers and was taught within a small-group classroom context.

Figure 14.1 outlines the three research studies presented here employing several versions of this EI program for preservice teachers. A number of small but important changes were made to each program phase based on an in-depth analysis of the original program (Gardner et al., 2008), as well as observations made by our research team with each delivery of the program. These mainly included editing of the program content and delivery method, logistic changes, the timing of each component, participation between “lecture” and active student, enhanced PowerPoint slides, an increase in interactive activities, greater use of homework activities, more and better described handouts, and then some content additions (e.g., mindfulness) based on theory- and evidence-based clinical psychology literature. For more details on component descriptions, session content, or program changes, please see Vesely-Maillefer (2015). The focus here is on changes in self-reported EI and indices of psychological health and well-being of preservice teachers after completion of the program and at various follow-up points.

Program Outcomes

Phase 1 Following some minor changes made to Gardner et al.'s (2008) original program, 23 undergraduate student teachers received the EI intervention program, and 26 served as no-intervention control participants (Vesely et al., 2014). All participants completed two measures of trait EI, the Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF; Petrides, 2009) and the Wong and Law Emotional Intelligence Scale (WLEIS; Wong, Wong, & Law, 2007), as well as self-report measures of teacher efficacy (Tschannen-Moran & Woolfolk Hoy, 2001), perceived stress (Cohen, Kamarck, & Mermelstein, 1983), anxiety (Norman, Cissell, Means-Christensen, & Stein, 2006), satisfaction with life (Diener, Emmons, Larsen, & Griffin, 1985), resiliency factors of mastery, relatedness, and emotional reactivity (Saklofske et al., 2013; updated by Prince-Embury, Saklofske, & Nordstokke, 2017), and a demographics questionnaire. All scales were completed at the start and end of the EI program for the intervention group or at parallel time points for the control group. The intervention group also completed these measures at 1-month follow-up.

Comparisons of group means from preprogram to post-program showed no significant changes on any of the measures for the control group. However, the intervention group showed significant increases in trait EI measured with the WLEIS from preprogram to both post-program and 1-month follow-up assessments ($\eta^2 = 0.261$). Trends in the expected direction were also seen for trait EI measured with the TEIQue, as well as for teacher efficacy and the mastery component of resiliency, indicating promising impact for the program. Although these results fell just short of statistical significance criteria with the small sample size, the effect sizes for these latter three outcomes showed changes of 11.8%, 15.9%, and 19.9%, respectively (Vesely et al., 2014). The effect size may provide a more relevant understanding 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 our studies as a measure of practical significance in line with mean effect sizes from relevant meta-analyses (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Gignac & Szodorai, 2016). These preliminary results prepared the foundation for the next phases of the EI program administration and guided modifications to the program (e.g., skills teaching), as well as further changes to the research methodology (e.g., outcome measures).

Phases 2 and 3 The next two phases of the teacher EI project are summarized below with greater detail reported in Vesely-Maillefer (2015). Once again, the program followed the same core format, but additional modifications were made at this stage based on previous participant feedback and observations by the researchers, logistic concerns, and research suggested additions to the content and activities (Vesely-Maillefer, 2015). None of the changes were intended to modify the basic tenets of the program but rather enhance the methods of delivery and clarify the content (e.g., addition of mindfulness activities, increased group interaction, improved handout materials, daily logs, etc.).

Student teacher candidates enrolled in a full-time teacher education university program volunteered for this research phase, of which 34 received the EI intervention program and 21 served as no-intervention control participants. The slight imbalance in group numbers occurred due to student scheduling conflicts. The program was administered in two stages in order to accommodate more dyad and small group work and discussion. All participants completed two measures of trait EI: the Genos and the WLEIS. The Genos was substituted for the TEIQue-SF because the former is more aligned with the EI facets targeted by the program. The outcome measures of teacher efficacy, perceived stress, satisfaction with life, and the demographics questionnaire were the same as in phase one, with the addition of a measure of task-focused, emotion-focused, and avoidance coping strategies (Endler & Parker, 1999). The intervention group completed all the scales at the start and end of the EI program and again at 1-month and 6-month follow-ups. The control group completed all the questionnaires at the same four time points as the intervention group. Due to attrition, the 1- and 6-month follow-up assessments had fewer participants.

Differences between the intervention and control groups at preprogram were nonsignificant for all variables. As in the previous phase, the control group showed no significant changes in any of the measured outcomes across the four time points. The intervention group showed significant increases from preprogram to post-program on both trait EI measures ($\eta^2 = 0.192$ for WLEIS; $\eta^2 = 0.115$ for Genos), teacher efficacy ($\eta^2 = 0.250$), and task-focused coping ($\eta^2 = 0.168$), which is regarded as one of the most adaptive ways of coping with stress (see Chap. 4 by Zeidner & Matthews, this volume). All of these outcomes except the Genos (though the effect size continued to grow) were significantly different from the control group at post-program. Given the nonsignificant changes on all measures for the control group over the four testing periods and the small sample sizes of the control group due to attrition, statistical comparisons across the remaining time points (at 1 and 6 months) were only made for the intervention group. At 1-month follow-up, the intervention group maintained significant increases in trait EI ($\eta^2 = 0.362$ for WLEIS; $\eta^2 = 0.300$ for Genos), life satisfaction ($\eta^2 = 0.202$), task-focused coping ($\eta^2 = 0.396$), and teacher efficacy ($\eta^2 = 0.225$) and additionally showed a significant decrease in levels of perceived stress ($\eta^2 = 0.137$). Further follow-up at 6 months showed that the positive changes remained significant for trait EI ($\eta^2 = 0.288$ for WLEIS; $\eta^2 = 0.247$ for Genos), life satisfaction ($\eta^2 = 0.160$), task-focused coping ($\eta^2 = 0.348$), and teacher efficacy ($\eta^2 = 0.196$). While there appeared to be somewhat of a quadratic trend with a slight drop-off of results at 6 months, the changes from pretest remained significant. The patterns of mean-level changes for all variables are depicted in Fig. 14.2.

What the Results Tell Us

The outcome evaluation results indicate that the EI training program not only increased the participants' trait EI levels, but it also improved their capacity to cope with stress and bolstered their professional confidence in being an effective teacher.

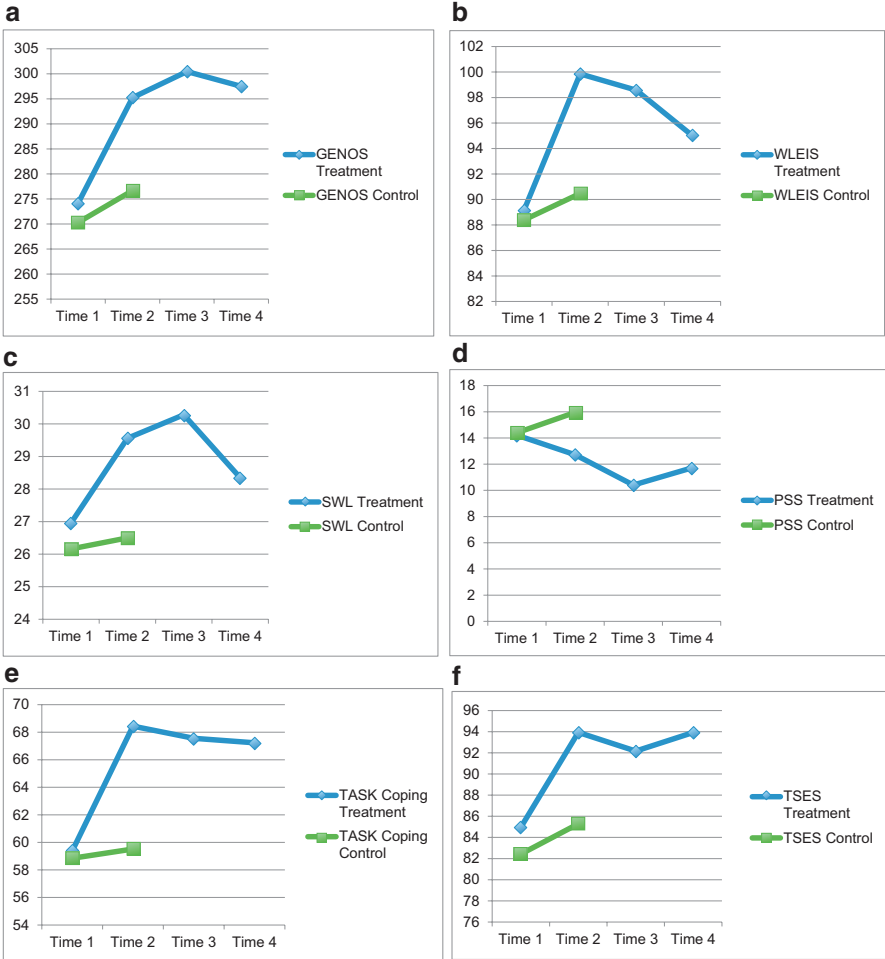


Fig. 14.2 Mean-level changes within and between groups for (a) trait EI measured with the Genos; (b) trait EI measured with the WLEIS; (c) satisfaction with life (SWL); (d) perceived stress (PSS); (e) task-focused coping; and (f) teacher efficacy (TSES). Time 1 = preprogram; Time 2 = post-program; Time 3 = 1-month follow-up; Time 4 = 6-month follow-up

These positive changes were seen after program completion and, in many cases, at 1- and even 6-month follow-ups, providing further evidence that EI training does affect perceived change in those areas that are very likely to be beneficial for teachers-in-training and upon entry into the profession. Although strength of impact on the different measures varied, results from all administrations of the EI program showed increased self-reported trait EI beyond what could be attributed to the passage of time, as verified by comparison to the no-intervention control group. These results offer further evidence that trait EI can be increased through targeted EI

training (Karahan & 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 provide incentives for researchers to investigate further effects of these programs. Comparing phase one (Vesely et al., 2014) with phases two and three also offers a replication that the program can improve workplace trait EI as operationalized with WLEIS and implies that, in contrast to the TEIQue, the Genos measure, which maps more closely onto the EI competencies taught in this particular program, may better capture the outcomes of learning that take place during the program.

The finding that increases in trait EI (as measured with Genos) were maintained months after the program's end raises an important question about the processes that lead to sustainable change. It is most important to understand the mechanisms through which EI competencies are developed and how they can be packaged into a teacher training program, such that they lead to best possible outcomes both individually for the teacher and in the classroom. To unpack potential mechanisms through which change might have occurred, phases two and three of this research program included a parallel process evaluation component, assessing the fidelity of implementation of each step of the program, as well as participants' feedback and their patterns of session completion, understanding, and application. Analyses of these data highlighted three pathways (in addition to high program implementation fidelity) that likely contributed to the conversion of EI knowledge into behavioral application: (1) self-reflection on one's own EI competencies, behaviors, and emotional triggers; (2) regular practice and application of the EI skills learned; and (3) the resulting sense of self-efficacy in being able to effectively use one's EI skills (Vesely, Saklofske, & Vingilis, *in preparation*; Vesely-Maillefer, 2015). Combined with this process evaluation evidence, we are more confident in attributing the observed outcomes to the EI program itself.

The outcome evaluation results also point to implications that may guide future research and should be tested further empirically. For example, a further breakdown of the specific facets of the Genos EI model would point to those aspects of the current training program that improved more than others and can help us cater the programming more specifically to those skills we want to improve. It would also allow us to analyze patterns of change more precisely in order to make improvements to the program as well as the ways we measure the outcomes. For example, larger changes may be evident for the more observable EI competencies like emotional management and self-control (e.g., reduced rumination or a decrease in expressed anger), compared to, for instance, emotional self-awareness. Thus, some effects of EI training may not be so readily and quickly observable, indicating that perhaps there is stronger impact than is evident in the results.

The impact of EI training on other important teacher outcomes has key implications. Teacher efficacy is recognized to be a major variable in the application of good teaching practices (e.g., Bandura, 1997; Skaalvik & Skaalvik, 2010; Woolfolk, Rosoff, & Hoy, 1990). Increases in self-reported teacher efficacy from preprogram to all post-program and follow-up phases are most encouraging, especially when compared with the control group. While all participants were active in the teacher education program, the EI intervention group in phases two and three reported

increased teacher efficacy over those who only participated in the regular teacher education program during the same time period. As teacher efficacy predicts a range of positive and effective classroom variables including instructional quality, classroom climate, classroom management, use of more effective teaching strategies, persistence in teacher education, as well as continuing to pursue their teaching goals and aspirations (Muijs & Reynolds, 2015; Skaalvik & Skaalvik, 2010; Woolfolk Hoy & Davis, 1990; Woolfolk Hoy & Davis, 2006), building competencies that enhance teacher efficacy can be invaluable to the teaching profession. Furthermore, additional positive results showing changes across time in the mastery aspect of resiliency in phase one, in task-focused coping in phases two and three, in stress at 1-month follow-up, and in life satisfaction at post-program and 1-month follow-up of phases two and three provide further evidence of the positive impact of EI training in various areas impacting both teaching competencies and teacher well-being (Brackett et al., 2010, 2011; Gardner, 2005; Gardner et al., 2008; Parker et al., 2006; Poole & Saklofske, 2009; Slaski & Cartwright, 2003).

We strongly advocate for the EI training for both preservice and practicing teachers, including administrators. The evidence continues to accrue for the impact that EI has on both supporting mental and physical health and the capacity to manage and cope with the stresses and strains of work and everyday life. The studies described here add further data to the position that trait EI is at least perceived by the individual to enhance their capacity to manage and more effectively cope with stress. Again, this was shown in the second and third phases of our research program, indicating a significant and lasting increase not only in trait EI but also in task-oriented coping across all time points, together with a decrease in reported stress at both immediately after the program and 1 month later. As discussed in Vesely-Maillefer (2015), this fits with the current literature describing pathways between trait EI, stress, and coping (for a more critical analysis of that literature, see Chap. 4 by Zeidner & Matthews, this volume), showing the relationship between developing emotional competencies concurrent with coping strategies (Downey, Johnston, Hansen, Birney, & Stough, 2010) and emphasizing the view that building effective emotion regulation strategies can impact one's competency behaviors in educational settings (Kurki, Järvenoja, Järvelä, & Mykkänen, 2016).

Relatedly, trait EI and coping have been shown to combine to mediate the effects of personality on stress (Austin et al., 2010; Saklofske et al., 2012). This supports other studies reporting that individuals with higher trait EI show higher self-efficacy to cope, as they will appraise stressful situations as a challenge rather than a threat (Laborde, Brüll, Weber, & Anders, 2011; Mikolajczak & Luminet, 2008), and that higher EI (both trait and ability) may influence mental health outcomes through differential impact on coping with various stressors (selection and implementation of coping strategies, respectively; Davis & Humphrey, 2012). High trait EI individuals are also less reactive in response to stress measured via salivary cortisol (Mikolajczak, Roy, Luminet, Fillée, & de Timary, 2007) or heart rate variability (Laborde et al., 2011). Perhaps this may suggest that high trait EI individuals are more likely to select and use cognitive reappraisal (or problem-focused coping) in order to decrease stress (Keefer,

Parker, & Saklofske, 2009). Arguably, this indicates that these individuals are able to utilize more adaptive and situation-relevant coping to manage stress more effectively and thus reduce its impact.

Integrating EI Training into the Education System

The positive changes seen here with student teachers following the participation in the EI program add to the relevance and importance of including EI training in teacher education programs. Practically speaking, the teacher training period is a key time in which prospective educators build the foundational skills for their teaching careers, thus making this an ideal period for building increased personal capacity. This time period also serves as a critical period in the prevention of mental and physical health challenges.

Many professional development programs for in-service teachers include components targeted toward helping teachers cope with personal and professional difficulties *in addition* to promoting pedagogical skills (see Chap. 10 by Montgomery et al., this volume). For example, Rational Emotive Education (Maag, 2008; Nucci, 2002) is used to help teachers regulate their emotions when dealing with disruptive students in educational settings. Likewise, the PATHS program (Kusche & Greenberg, 1994) is used to promote classroom climate and help teachers respond to students' emotional needs more effectively. These programs include numerous components that overlap with skills taught within EI-specific programs (Vesely et al., 2013) and have shown to be effective in improving these skills. Although empirical evidence shows that these factors contribute to burnout and its prevention (Lowenstein, 1991; Maslach, 1999), such emotion-based programs have been repeatedly used for *intervention only*. Despite showing a range of positive outcomes through professional development programs – some of them with specific EI components (Ciarrochi et al., 2007; Kornacki & Caruso, 2007) – the teaching of skills that may lead to less stress, lower rates of burnout, and prevent leaving the profession early is currently not integrated into teacher education.

Integrating an EI program into teacher training could have a considerable impact on the future careers of teachers, by improving their emotional skills and preparing them to deal more effectively with the multiple stresses associated with this profession. Specific empirically evaluated programs, including the EI program presented in this chapter, can provide an avenue through which education systems gain financial benefit, retain good teachers, improve their mental health and well-being, and thus positively impact the next generations of learners. By improving their own EI skills, teachers have a chance to identify, reappraise, practice, and thus reduce their use of less effective strategies, prior to entering into the professional workforce (Parker, Saklofske, Wood, & Collin, 2009). Linking back to the notion of teacher efficacy and the knowledge that it can be a key predictor of classroom outcomes (Skaalvik & Skaalvik, 2010), studies have shown that new teachers will often show a decrease in their sense of teacher efficacy during their first year of teaching but

that aside from this, teacher efficacy tends to be quite stable once it is established (Tschannen-Moran & Woolfolk Hoy, 2001; Woolfolk Hoy & Burke-Spero, 2005). Importantly, individuals with high task-related self-efficacy are more likely to seek out challenging goals, put forth effort, persevere in the face of adversity, and interpret failures as learning opportunities (Bandura, 1997). This provides an even stronger rationale for offering those programs that develop the needed personal resources and professional capacity during the formative period of teacher training.

However, EI training is not a one-shot, short-term program that can carry a teacher throughout their career. As observed in the research program reviewed here, the drop-off of some outcome scores at longer-term follow-ups indicates the need to routinely and both directly and systemically build these supports into teacher training programs and also into the educational structure that would allow for ongoing support and development to continue throughout one's professional career. A focus on skill building and *prevention rather than intervention*, utilizing EI training, will not only benefit the teacher personally but also their effectiveness in meeting the full range of their students' educational and personal needs. And a final most encouraging observation is the high program satisfaction ratings given by the preservice teachers receiving the EI training: they saw strong "value added" at both the professional and personal levels.

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Chapter 15

Leading Change: Developing Emotional, Social, and Cognitive Competencies in Managers During an MBA Program



Richard E. Boyatzis and Kevin V. Cavanagh

Abstract A number of social, emotional, and cognitive competencies have been shown to predict management, professional, and leadership effectiveness. Can these competencies be developed through graduate management education? This chapter provides an update on the 25-year empirical investigation conducted at the Weatherhead School of Management, Case Western Reserve University, to explore patterns and sustainability of competency development in a full-time MBA program before and after it was enriched with the Leadership Assessment and Development (LEAD) course. Comparisons of MBA students' self- and other-rated competency assessments at graduation with the same assessments conducted at the time of entry into the program were examined in cohorts from 1987 to 1990 (pre-LEAD) and 1990 through to 2013 (post-LEAD), the last 5 years of which have never been published. In addition to updating and extending the findings of prior publications of this research program, this chapter aimed to open the discussion on the emotional and social competencies which have been shown not to improve over time and to offer suggestions for management educators around the world.

Graduate management education seeks to enhance the likelihood that graduating students will be effective leaders, managers, or professionals, as well as become contributing family members, community members, and citizens of the world. However, the importance of obtaining these graduate-level degrees and the cost connected to the education has risen dramatically over the last decade. According to a report from the Georgetown University Center on Education and the Workforce, jobs that require a master's degree are expected to grow 21.7% through 2020, faster than the growth at any other education level (Carnevale, Strohl, & Melton, 2011). In the face of this overwhelming statistic, MBA programs face tremendous pressure to ensure the development of core competencies that will produce effective leaders in the workforce. What competencies to tailor education toward and how to engage the

R. E. Boyatzis (✉) · K. V. Cavanagh
Weatherhead School of Management, Case Western Reserve University, Cleveland, OH, USA
e-mail: richard.boyatzis@case.edu; kvc4@case.edu

students with actively improving them are two key questions leadership educators are faced with when constructing their curriculum (Boyatzis, Lingham, & Passarelli, 2010).

Mainstream competency and job performance theories claim that to be an effective leader or manager, individuals need to not only acquire the requisite knowledge needed for doing the job well but they also must be capable of and motivated to apply their knowledge in order to achieve the desired outcomes (Boyatzis, 1982; Boyatzis et al., 2010). These dispositional behavioral capabilities are called competencies, which Boyatzis (1982) defined as “the underlying characteristics of a person that lead to or cause effective and outstanding performance” (p. 20–21). Previous syntheses of the research on competencies that set apart outstanding leaders, managers, and professionals have identified three primary clusters (Amdurer, Boyatzis, Saatcioglu, Smith, & Taylor, 2014; Boyatzis, 1982, 2009; Druskat, Mount, & Sala, 2005; Fernández-Berrocá & Extremera, 2006; Joseph & Newman, 2010; O’Boyle, Humphrey, Pollack, Hawver, & Story, 2011):

1. Cognitive intelligence (CI) competencies, which encompass general intelligence (g) abilities traditionally emphasized in graduate education (e.g., systems thinking, pattern recognition)
2. Emotional intelligence (EI) competencies, such as emotional self-awareness, emotional self-control, adaptability, self-confidence, initiative, positive outlook, and achievement orientation
3. Social intelligence (SI) competencies, such as empathy, organizational awareness, inspirational leadership, social influence, coaching and mentoring, teamwork, and conflict management

Cognitive, emotional, and social competencies can best be described as the behavioral applications of CI, EI, and SI, respectively – that is, knowledge and abilities in action (Boyatzis, 2009; Cherniss & Boyatzis, 2013). As such, behavioral competencies offer a closer link of these abilities to job and life outcomes (Cherniss, 2010).

In order to add value, graduate management educators need to motivate and engage students in self-directed learning, beginning with allowing the students to explore new possibilities for themselves in each competency domain. Unfortunately, graduate programs often direct their students to the inside of a textbook instead of supporting an individual’s competency development and behavior change. In fact, research has shown that graduate programs often appear to have less impact on behavior change than introductory corporate training (Cherniss & Adler, 2000; Goleman, Boyatzis, & McKee, 2002). Historically, minimal attempts were made in top MBA programs to enhance EI and SI competencies in enrolled students. According to the outcome assessment studies conducted by the Association to Advance Collegiate Schools of Business in the early 1980s, the graduating students from two highly ranked business schools showed improvements of only 2% in the behavioral indicators of EI and SI competencies, compared to their levels when they began their MBA training (Boyatzis & Sokol, 1982). In fact, when students from four other high-ranking MBA programs were assessed on a range of tests and direct behavioral measures, they showed a gain

of 4% in self-awareness and self-management abilities, but a decrease of 3% in social awareness and relationship management (Boyatzis, Baker, Leonard, Rhee, & Thompson, 1995; Boyatzis & Sokol, 1982). The challenge that continues to exist in MBA programs today is one that has persisted for many years: the need to focus the education on developing the whole person (Dewey, 1938).

Prior research (Boyatzis et al., 2010; Boyatzis & Saatcioglu, 2008; Boyatzis, Stubbs, & Taylor, 2002) shows that successful leadership development courses within MBA programs are ones which share the responsibility between educators and students. Unfortunately, their typical impact is short lived. The often referenced “honeymoon effect” is now a common term applied to training programs, which might help an individual improve a behavioral trait immediately following the program, but within months the beneficial effect drops off (Campbell, Dunnette, Lawler, & Weick, 1970). Often, this “honeymoon effect” occurs because of the short time periods in which research studies are conducted. MBA programs seem to suffer from this fate as well. Courses should be designed around meaningful, effective, and sustainable change. While many models of behavioral change exist, few models explain how individuals change and develop in sustainable ways (McClelland, 1985; Prochaska, DiClemente, & Norcross, 1992).

We hope to accomplish four primary goals in this chapter to address the issues raised above: first, to provide an overview of key literature on the relevance of EI and SI competencies for workplace and MBA outcomes; second, to review and discuss the importance of the Intentional Change Theory (ICT; Boyatzis, 2008) as the central theoretical framework, which has been shown to inspire sustainable self-development in full-time MBA curriculum; third, to review and extend the results from the prior 25 years of longitudinal research in MBA competency development conducted at the Weatherhead School of Management, Case Western Reserve University; and, finally, to discuss the competencies which have yet to produce consistent development over time and offer suggestions for the development of these competencies through the use of ICT for the leaders of management education.

Relevance of Emotional and Social Competencies in the Workplace

In organizational settings, EI became a mainstream research topic when several scholars (e.g., Goleman, 1995; Matthews, Zeidner, & Roberts, 2002; Salovey & Mayer, 1990) argued that cognitive intelligence (*g*, measured by traditional IQ tests) did not fully capture important managerial abilities, such as emotional self-awareness, self-regulation, empathy, and social skills. The construct of EI encompasses these and other emotion-related abilities that are not assessed by IQ tests, blending both neocortical and subcortical processes, combining affective and cognitive abilities (Goleman, 2006). All contemporary EI models include both intrapersonal and interpersonal competencies as they pertain to the awareness, understanding,

and management of one's own and others' emotions (Stough, Saklofske, & Parker, 2009). Therefore, research on EI subsumes many key SI competencies of relevance to the present chapter.

Organizational EI research has been classified into three streams based on the way the EI construct has been measured (Ashkanasy & Daus, 2005; O'Boyle et al., 2011). Stream 1 refers to ability-based models that use IQ-style maximal-performance tests to assess individuals' emotion-related knowledge and emotion-processing abilities (e.g., Mayer, Salovey, Caruso, & Sitarenios, 2003; see also Chap. 2 by Fiori & Vesely-Maillefer, this volume). Stream 2 refers to typical performance measures (e.g., self-reports, observer ratings, behavioral observations) that capture individuals' dispositional use of their EI knowledge and abilities in everyday behavior (e.g., Schutte, Malouff, & Bhullar, 2009). Finally, Stream 3 refers to "mixed models," also assessed with typical performance measures, which go beyond the dispositional use of EI abilities to also include traits, attitudes, values, and other motivation factors that influence whether, when, and why individuals might use (or not use) their EI knowledge and abilities (e.g., Bar-On, 1997; Boyatzis & Goleman, 2007; see also Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). In this taxonomy, Stream 3 measures most closely align with Boyatzis' (1982) definition of competencies as motivated applications of one's knowledge and abilities at the behavioral level.

There does still exist some debate in the field regarding the relative utility of Stream 3 EI measures, which have been criticized for having too much overlap with other personality, self-concept, and ability constructs that are, in and of themselves, known predictors of workplace outcomes and therefore would have little value added (Ashkanasy & Daus, 2005; Joseph, Jin, Newman, & O'Boyle, 2015). It is useful to think of EI abilities (Stream 1), dispositions (Stream 2), and their behavioral manifestations (Stream 3) as multiple levels of the same phenomenon, where abilities and traits drive applied behaviors and are in turn reinforced by those behaviors (Cherniss, 2010; Cherniss & Boyatzis, 2013; Goleman, 2006). This implies that Stream 3 EI competencies should be more closely linked to career and life outcomes than the other two EI streams (Boyatzis, 2009; Cherniss, 2010; Cherniss & Boyatzis, 2013).

Consistent with this view, meta-analyses comparing the three EI research streams have consistently reported Stream 3 measures as having considerably stronger predictive value relative to Stream 1 measures and somewhat stronger or comparable predictive value relative to Stream 2 measures, for a wide range of workplace outcomes, including job performance (Joseph & Newman, 2010; O'Boyle et al., 2011), job satisfaction and organizational commitment (Miao, Humphrey, & Qian, 2017a), organizational citizenship and counterproductive workplace behaviors (Miao, Humphrey, & Qian, 2017b), leadership behaviors (Harms & Credé, 2010), subordinates' job satisfaction (Miao, Humphrey, & Qian, 2016), and subjective well-being (Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016). Notably, Stream 3 competencies showed incremental predictive validity for each of these outcomes above and beyond cognitive intelligence (*g*) and basic personality (see also Boyatzis, Massa, & Good, 2012).

This is not to say, of course, that cognitive intelligence does not matter in the workplace. General cognitive ability (*g*) has still shown to be a consistently strong predictor of individual job performance (e.g., Nisbett et al., 2012), and in some studies, *g* has shown to have more predictive utility for job performance than EI competencies (e.g., Joseph & Newman, 2010). However, a body of literature also exists in which EI competencies have shown to have greater predictive utility than *g* (Boyatzis et al., 2012; Côté & Miners, 2006). The link between EI competencies and job performance may very well vary depending on the job context, with stronger effects recorded for jobs that are high in emotional labor.

If we move beyond job performance as a primary outcome measure, the relevance of EI and SI over CI competencies becomes clearer. Mainstream competency theory would predict that early career use of EI and SI competencies would result in a person being seen as “good with people,” which would lead to more leadership opportunities and positive feedback in the long run (Boyatzis, 2009). In contrast, early career use of CI competencies may result in being seen as a problem solver, analyst, or strategic thinker, which in turn could lead to opportunities in staff jobs, but not necessarily ones associated with moving up the managerial hierarchy (McClelland, 1985).

Relevance of Emotional and Social Competencies to MBA Outcomes

Without argument, career success is an important measure for graduates of professional programs like MBA. Career success refers to a subjective reaction to one’s career experiences (Heslin, 2005). It is fair to say that few individuals pursue an MBA with the primary goal being to grow, mature, or develop morally and aesthetically. Rather, most individuals enter an MBA program because they wish to enter a new career or enhance their success in an existing career. This heuristic has led many scholars to argue that the most relevant outcome from an MBA program is the amount of money people earn over their careers. However, not only is salary a limited measure of success in life, but it is often regarded as a short-term indicator (Luthans, Hodgetts, & Rosenkrantz, 1988) that is often contaminated by other factors, such as type of industry, country of origin, and relationships with one’s immediate boss.

Perhaps more relevant to our discussion in this chapter is how an MBA program can add value to a person’s EI and SI competencies which, in turn, contribute to career and life satisfaction (Amdurer et al., 2014). Advocates for career development claim that early successes during organizational entry (such as the ones immediately following the graduation of an MBA program) stimulate self-confidence, efficacy, and a self-image that enhance goal-seeking behavior (Alexander, Druker, & Langer, 1990). Using competencies in jobs early in one’s career tends to lead to positive reinforcement (i.e., early “wins”) and is likely to alter a person’s expectations

in the long term. Recent research has shown a positive relationship between EI and SI competencies and psychological well-being at work (Carmeli, Yitzhak-Halevy, & Weisberg, 2009; Sánchez-Álvarez et al., 2016). For example, Carmeli et al. (2009) found that employees with higher EI competencies reported greater self-esteem, life satisfaction, and self-acceptance. There is also evidence to suggest that having greater emotional management abilities is related to feeling more satisfied with one's career (Lounsbury et al., 2003).

Competency Development Through the Lens of ICT

Fundamentals of Intentional Change

Originally introduced as self-directed learning theory (Boyatzis, 1994; Goleman et al., 2002), ICT is often discussed at the individual level and is a helpful framework in describing the essential components of desirable, sustainable change in one's behavior, thoughts, feelings, and perceptions (Boyatzis, 2008). The "change" aspect of ICT can be seen in many different ways, including how a person acts, how a person talks about their dreams and greatest inspirations, or even in the way they feel in certain situational contexts or around certain people in their life. Two keys are fundamental to effective application of the ICT framework: *desired* and *sustainable* change. When we say that the change is desired, we mean to say that the individual in question wants the change to occur. It is not simply an espoused desire – it is enacted and tested in reality. When we say that the change is sustainable, we mean that it endures – it lasts a relatively long time.

These two key fundamentals are vital because research has shown that information acquired temporarily (i.e., for a test or presentation) is soon forgotten (Specht & Sandlin, 1991). Specht and Sandlin (1991) showed that the average half-life of accounting knowledge, from an introductory accounting course in a top-ranked MBA program, was approximately 6.5 weeks. Students in an MBA program may act as if they care about learning the material presented (and even appear to genuinely go through the motions) but then proceed to disregard it or forget it – unless it is something which they intrinsically wanted to learn in the first place. In this way, it appears that most, if not all, sustainable behavioral change is intentional. An important caveat to mention is that a "desirable, sustainable change" may also include the desire to maintain a current desirable state, relationship, or habit – change does not always mean doing a 180 degree turn.

Through the natural forward momentum of life, we often find ourselves drifting in and out of less desirable states. Sometimes this happens when other people in our lives (e.g., boss, friend, significant other) take notice of an undesirable quality and bring it into our awareness (e.g., during a performance evaluation). Sometimes this happens when an individual high in emotional self-awareness or mindfulness (Boyatzis & McKee, 2005) catches notice of a less desirable state, and he/she will

experience the change process as a more natural phenomenon. This experience, be it internally or externally driven, is what Boyatzis (1982) termed an “epiphany” or “discovery.”

“Discoveries” of Intentional Change

The ICT includes five “discoveries,” or phases, which assist in creating sustainable change. The five phases include (1) the Ideal Self; (2) the Real Self; (3) Learning Agenda; (4) Experimentation and Practice with new behaviors; and (5) Supportive Relationships that facilitate a person’s development experience.

The Ideal Self The first discovery and suggested starting point for the process of intentional change is the discovery of who you want to be, the Ideal Self. An individual’s Ideal Self has three core components: (1) an image or vision of a desired future which does not presently exist, (2) the belief that one can attain this new vision, and (3) the aspects of one’s core identity which will serve as a foundation for building the desired future (Boyatzis & Akrivou, 2006). Decades of research have resulted in a deep literature that emphatically supports the power of positive imagining, including examples in sports psychology (Bennis & Nanus, 1985; Carter et al., 2000; Loehr & Schwartz, 2003; Meister et al., 2004; Roffe, Schmidt, & Ernst, 2005), meditation, and other psycho-physiological research (Jack, Boyatzis, Khawaja, Passarelli, & Leckie, 2013). This creates an opportunity and challenge for MBA programs around the world to find ways in which to capture students’ passions and imaginations for the future. The primary challenge of this phase is to avoid pushing MBA students toward the “ought” self: a future in which the individual is told how they *should* be (e.g., you should be an accountant because you are good with numbers), as opposed to how they *want* to be.

The Real Self The second discovery is the discovery of who you are right now, the Real Self. In order to be completely aware of the Real Self, an individual must make the connection between their internal sense of self and the person that others see them as. In general, there tends to be a disconnect between self- and other-rated assessments of traits and competencies (De Los Reyes, Thomas, Goodman, & Kundey, 2013). There are several reasons for such incongruences (Keefer, 2015; Paulhus & Vazire, 2007). Some competencies (e.g., emotional self-awareness) are more difficult to observe than others, and the observer’s perspective tends to be limited to one particular context (e.g., in school vs. at home). Individuals may also hold distorted self-perceptions often without being aware of it. For example, individuals may unconsciously protect themselves from the intake of incongruent information about the self as a defense mechanism. Another, arguably more common reason, is a lack of direct and consistent feedback received over time, which is often the case for EI and SI competencies. Consider an example of an individual going through a semiannual performance review. Receiving feedback, particularly negative feedback, every 6 months may catch someone off guard because the

others' perception was building over time and they were unaware of this growing perception. It is easy to see how this unawareness of gradual changes, metaphorically referred to as the "boiling frog syndrome," has manifested itself in MBA programs around the globe. With standardized exams and verbal assessments, students are not receiving organic feedback at a rate that can assist with behavioral change and growth. When we connect inconsistent feedback with the aforementioned research about information acquired temporarily being soon forgotten (Specht & Sandlin, 1991), we can begin to see the vicious cycle that students of 2-year MBA programs find themselves in.

Where do the discoveries of the Ideal Self and the Real Self leave us? Simply, areas in which the Real Self and Ideal Self are congruent with each other can be considered strengths, whereas areas where a person's Real Self and Ideal Self are incongruent can be considered gaps, or developmental opportunities. Engaging MBA students with not only spotting these gaps but actively working to reduce them could be one of the most significant opportunities for MBA programs to make a meaningful and lasting difference.

Learning Agenda The third discovery in the ICT model is the proactive development of a Learning Agenda with a key focus being on that of achieving the desired ideal self. The purpose of a Learning Agenda is to focus one's energy and effort on personal development. Many MBA students often focus on their general business acumen and cognitive intelligence skills when attending an MBA program, in order to ensure that they meet the expectations of "the real world." Rarely do we hear MBA students talk about developing themselves personally, including socially and emotionally, during their time in these programs. All too often, the emphasis on standardized testing and external benchmarks results in students adopting a performance orientation dominated by concerns over demonstrating knowledge and getting top grades, instead of a learning orientation that prioritizes the process of continual self-improvement. Having a performance orientation is antithetical to intentional change, as it evokes anxiety and doubts about whether or not one can achieve the expected level of performance, which in turn leads to avoidance of challenging tasks that have a high potential for failure but also the greatest opportunity for learning (Chen, Gully, Whiteman, & Kilcullen, 2000; Yeager & Dweck, 2012). In contrast, a learning orientation arouses a positive belief in one's capacity for self-improvement, which in turn promotes perseverance in the pursuit of challenging tasks (Beaubien & Payne, 1999). Therefore, the discovery of the Learning Agenda requires a fundamental change in the student's mindset, from a "performer" who hides personal shortcomings to a "learner" who celebrates room for growth.

Experimentation and Practice The fourth discovery is often where individuals struggle to make the actual changes – experimenting and practicing the desired new behaviors. The key to success in this discovery is understanding the difference between experimenting and practicing. Once an individual has put together a plan of action, they need to experiment with the change by trying it out in a comfortable setting. Change efforts are most effective when they occur in conditions in which

the person feels safe (Kolb & Boyatzis, 1970). This sense of psychological safety creates an atmosphere in which the person can try new behaviors, perceptions, and thoughts with relatively less risk of shame, embarrassment, or serious consequences of failure. For example, if an MBA student had a desire to strengthen his/her coaching and mentoring skills, they may reach out to a close friend or relative in order to try the new behavior. It is typically after a period of experimentation when the individual practices the new behaviors in actual settings within which they wish to use them, such as at school or work. It is important to mention here that intentional change is a continuous improvement process. In order to successfully develop or learn a new behavior, individuals must actively find ways to learn more from current, or ongoing, experiences.

Supportive Relationships The fifth and final discovery is a focus on the Supportive Relationships that enable us to learn. Our relationships with others around us are an essential part of our environment; they serve as facilitators, regulators, reinforcers, and sources of feedback for our behavior. The most crucial relationships are often a part of groups that have particular importance to us. These relationships and groups give us a sense of identity, guide us as to what is appropriate and “desirable” behavior, and provide feedback on our behavior. Our relationships and social groups help to keep us accountable – they are the most important source of protection from relapsing or returning to our earlier patterns of behavior. Wheeler (2008) analyzed the extent to which the MBA graduates worked on their goals in multiple “life spheres” (e.g., work, family, recreational groups). In a 2-year follow-up study of two of the graduating classes of part-time MBA students, she found that those who worked on their goals and plans in multiple sets of relationships improved the most and more than those working on goals in only one setting, such as at work or within one relationship. More often than not, the most common relationship that MBA students have occurs inside the pages of a textbook rather than with one another or their faculty members, which is a detriment to their development and a challenge to overcome for MBA programs aiming to promote sustainable, intentional change in their graduates.

Neuroscience of Intentional Change

The ICT is a framework under which a change effort can occur. In order for students to retain learning for longer than a few months, they have to move themselves through the complete experiential learning cycle (Kolb, 1984). Students in MBA programs have different learning style preferences and need to engage in the full learning cycle to have the new knowledge, attitude, skill, or competency take root in their neural networks.

Recent developments in neuroscience research suggest that the use of cognitive versus socioemotional competencies may rely on the activation of two distinct and mutually opposed neural networks in the brain: the Task-Positive Network (TPN)

and the Default Mode Network (DMN; Boyatzis, Rochford, & Jack, 2014). Activation of the TPN facilitates performance on a wide range of nonsocial tasks and is important for focusing of attention, problem-solving, decision-making, and behavioral control (Jack et al., 2012). The TPN is activated in many analytic experiences that MBA students have on a day-to-day basis, such as accounting, finance, and economics (Jack et al., 2012). However, being open to change efforts of core competencies, new ideas, and people requires activation of the DMN, which plays a key role in emotional self-awareness, social cognition, empathy, ethical reasoning, as well as insight and creativity (Boyatzis et al., 2014). The dilemma we are faced with as scholars and educators is that these two networks are known to suppress each other, in that activity in one network tends to inhibit activity in the other network (Jack et al., 2013). So in order to help MBA students become equally effective at solving problems, making decisions, pursuing new ideas, resolving moral concerns, working with people, and continually developing their own competencies, MBA programs need to provide opportunities for students to cycle between the two networks and learn cues to the most appropriate moments to engage each (Boyatzis et al., 2014).

This is where we come full circle: we find that most sustained behavioral change is an intentional, desired change in an aspect of who one is (the Real Self) or who one wants to be (the Ideal Self), or both. The ICT helps us to describe the essential components and processes that encourage sustained, desired change to occur in a person's behaviors, thoughts, feelings, and/or perceptions (see Fig. 15.1 for a graphic representation of the ICT process).

Longitudinal Study of Competency Development Through MBA

Since 1987, the Weatherhead School of Management (WSOM) at Case Western Reserve University has collected cohort data on the core EI, SI, and CI competencies of entering MBA students and once again at graduation, in order to assess the development of those competencies throughout the 2-year MBA program. In 1990, WSOM introduced the Leadership Assessment and Development (LEAD) course in its first year MBA curriculum, designed specifically to develop the “whole person” – including those EI and SI competencies that have been consistently linked to managerial success yet routinely overlooked in the traditional MBA curriculum. For the first 18 years, LEAD was offered in the fall semester as a full-term course, similar to other MBA courses. However in 2008, LEAD was redesigned into two 6-week modules – one offered at the start of the fall semester and the other at the start of the spring semester – to avoid competing with the end-of-term demands (Boyatzis et al., 2010).

Comparisons of MBA students' competency assessments at graduation with the same assessments conducted at the time of entry into the program have been reported in earlier studies for the cohorts assessed between 1987 and 1989 (pre-LEAD) and 1990 through 2008 (Boyatzis et al., 1995, 2002, 2010; Boyatzis, Leonard, Rhee, & Wheeler, 1996; Boyatzis & Saatioglu, 2008). Summarizing the findings from these

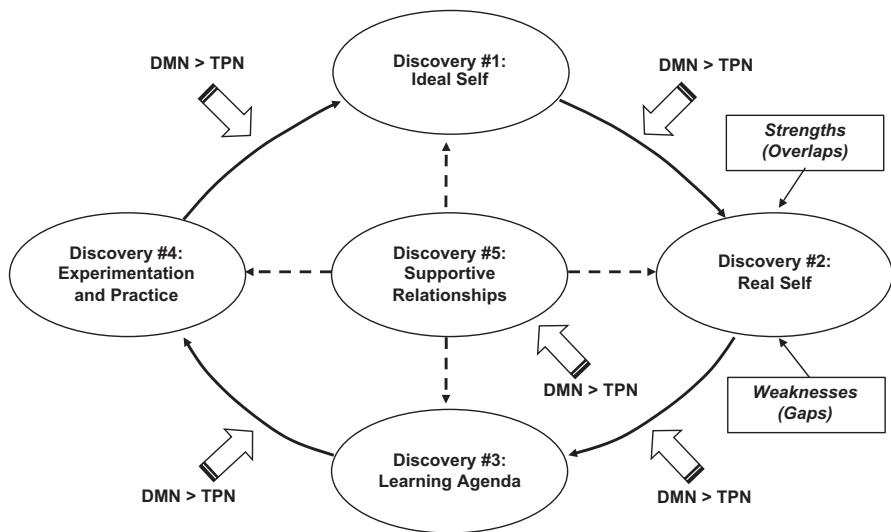


Fig. 15.1 Boyatzis’ model of intentional change. DMN Default Mode Network, TPN Task-Positive Network

earlier years, Boyatzis et al. (2010) reported that the baseline (pre-LEAD) cohorts showed significant improvements on only 38% of all the competencies measured in the baseline years, with the significant effects limited nearly exclusively to the CI domain, whereas EI and SI competencies showed little to no gains in the baseline cohorts. This finding reflects the state of MBA education at the time (Boyatzis & Sokol, 1982) and echoes a common sentiment that typical MBA programs do not provide the well-rounded development of competencies needed to be effective in leadership, management, and professional roles upon graduation.

In stark contrast, the subsequent cohorts that completed the LEAD-enriched MBA program showed significant improvements on 75–92% of the measured competencies, including a number of EI and SI competencies in addition to the mainstay CI competencies (Boyatzis et al., 2010). Although the study’s research design precludes making definitive causal attributions about the LEAD course, the consistency of the latter pattern across 18 years of LEAD-enriched programming provides compelling evidence for the assertion that EI and SI competencies can be developed through targeted MBA programming. The results reported below extend and update the earlier studies by evaluating the data from five additional cohorts that graduated in 2009 through 2013.

The LEAD Course

The LEAD course follows the underlying philosophy of the ICT in that adult sustainable behavioral change has to be intentional and that the responsibility for students’ learning and development has to be shared between educators and students

(Boyatzis et al., 2010). The course design incorporates four benchmarks based on the “discovery” phases of the ICT model: (1) Personal Vision, (2) Personal Balance Sheet, (3) Learning Agenda, and (4) coaching sessions with a specially trained professional coach.

The first LEAD module focuses on helping MBA students develop their Personal Vision, which includes articulating the most important aspects of their Ideal Self and identifying the most meaningful and appropriate career for them in their desired life. At the start of the second LEAD module, students complete a self-report assessment of their EI, SI, and CI competencies, as well as collect multisource informant assessments of the same competencies, to get 360-degree feedback on how others see their competencies in action. Students then review their assessment reports to increase their self-awareness of the Real Self and to create a Personal Balance Sheet that identifies areas of strengths as well as gaps they would like to work on in order to progress toward their Personal Vision. On the basis of the Personal Vision and Personal Balance Sheet, students then create an actionable Learning Agenda that outlines their goals or competencies they would like to achieve by the end of their MBA program, specific action steps and strategies they will take, and concrete criteria for monitoring and evaluating their progress. In line with the ICT philosophy, the Learning Agenda is a learning plan for things in which students are intrinsically motivated to engage, and not a traditional performance improvement plan.

The weekly LEAD activities and group discussions are facilitated by a faculty member. Moreover, the developments of the Personal Vision, Personal Balance Sheet, and Learning Agenda are each accompanied by a coaching session with a specially trained professional coach, as well as peer coaching. These Supportive Relationships provide the scaffolding for the other “discoveries” on the way toward sustainable change. The LEAD course prepares students for the last and the most demanding phase of the ICT cycle, Experimentation and Practice, which they continue to pursue throughout the rest of their MBA program. To assess the development of competencies and value added of the MBA program enriched with LEAD, students take an Exit Assessment in their last month or so prior to graduation. During the Exit Assessment seminar, students review the progress on their Learning Agenda and discuss desired competencies shown in their internships or recent work experiences. As a result, they update their Personal Vision and Learning Agenda.

Competency Assessment

Although the instruments used to assess EI, SI, and CI competencies in the WSOM longitudinal project have been modified and updated throughout the years, all of them have been based on the same conceptual model of emotional and social intelligence advanced by Boyatzis and Goleman (Boyatzis & Sala, 2004). The data for the five cohorts that are the focus of this chapter come from the latest in this series of instruments, the Emotional and Social Competency Inventory – University Edition (ESCI-U; Boyatzis & Goleman, 2007). The ESCI-U is a 70-item survey

Table 15.1 Competencies assessed by the Emotional and Social Competency Inventory – University Edition (ESCI-U)

Cluster	Scale	Brief description
EI	Emotional self-awareness	Understanding one's own emotions and their effects on performance
	Emotional self-control	Managing disruptive emotions and impulses and coping effectively with stress;
	Achievement orientation	Striving to improve oneself and setting challenging goals
	Adaptability	Flexibility in handling change and adapting one's thinking and strategies to changing conditions
	Positive outlook	Belief in positive outcomes and perseverance despite setbacks and obstacles
SI	Empathy	Sensing others' feelings and perspectives and taking an active interest in their concerns
	Organizational awareness	Sensing a group's emotional tone and identifying relationship dynamics
	Inspirational leadership	Motivating and guiding individuals and groups to achieve goals
	Conflict management	Managing others' negative emotions and effectively resolving disagreements
	Influence	Effectively persuading people and positively impacting others
	Coach and mentor	Identifying and supporting others' abilities and development needs
CI	Teamwork	Cooperating with others, sharing responsibility, and actively contributing to the team
	Systems thinking	Identifying causes and effects of complex situations
	Pattern recognition	Understanding analogies and making connections between ideas and events

Note: *EI* emotional intelligence, *SI* social intelligence, *CI* cognitive intelligence

which assesses 14 competencies (5 EI, 7 SI, and 2 CI) that empirically differentiate outstanding from average performers (see Table 15.1). The ESCI-U assessment is administered at the start of the MBA program and again shortly before graduation. Both times, students are asked to self-report on their own competencies and to solicit feedback from multiple informants (e.g., supervisor, direct report, client, significant other, siblings, friends, and classmates), whose ratings are then averaged for analyses.

Updated Results

Consistent with the analyses of earlier cohorts (Boyatzis et al., 2002, 2010; Boyatzis & Saatcioglu, 2008), a series of matched-pair *t*-tests were conducted separately for self-report and informant ratings, to identify competencies that showed significant

Table 15.2 Comparison of full-time MBA students' entering and graduating scores on the ECI-U and ESCI-U – informant assessment

		2007–2009	2008–2010	2009–2011	2010–2012	2011–2013
Cluster	Scale	<i>N</i> = 37	<i>N</i> = 66	<i>N</i> = 64	<i>N</i> = 54	<i>N</i> = 50
Self-awareness	Emotional self-awareness	3.9–4.0	3.9–4.0	3.9–4.0	4.1–4.1	3.9–4.1
		<i>t</i> = -1.3 ⁺	<i>t</i> = -3.0 ^{**}	<i>t</i> = -1.7 [*]	<i>t</i> = -1.4 ⁺	<i>t</i> = -4.9 ^{***}
Self-management	Emotional self-control	4.1–4.1	4.0–4.2	4.1–4.1	4.2–4.2	4.0–4.2
		<i>t</i> = -1.1	<i>t</i> = -4.5 ^{***}	<i>t</i> = -1.9 [*]	<i>t</i> = -1.9 [*]	<i>t</i> = -4.4 ^{***}
	Achievement orientation	4.4–4.2	4.3–4.3	4.2–4.2	4.3–4.3	4.2–4.3
		<i>t</i> = -0.2	<i>t</i> = -0.2	<i>t</i> = 0.8	<i>t</i> = 1.2	<i>t</i> = -2.1 [*]
Adaptability	4.0–4.1	4.1–4.2	4.1–4.2	4.2–4.3	4.1–4.2	
	<i>t</i> = -1.3	<i>t</i> = -2.5 ^{**}	<i>t</i> = -1.7 [*]	<i>t</i> = -1.9 [*]	<i>t</i> = -3.6 ^{***}	
Positive outlook	4.2–4.2	4.2–4.2	4.2–4.2	4.3–4.3	4.2–4.3	
	<i>t</i> = -0.2	<i>t</i> = -1.8 [*]	<i>t</i> = -0.2	<i>t</i> = 0.3	<i>t</i> = 2.9 ^{**}	
Social awareness	Empathy	4.0–4.1	4.0–4.2 ^a	4.1–4.1	4.2–4.2	4.0–4.2
		<i>t</i> = -1.9 [*]	<i>t</i> = -3.1 ^{**}	<i>t</i> = -0.6	<i>t</i> = -1.2	<i>t</i> = -4.7 ^{***}
	Organizational awareness	4.2–4.2	4.3–4.3	4.3–4.3	4.4–4.3	4.2–4.3
		<i>t</i> = -0.1	<i>t</i> = -1.2	<i>t</i> = -0.8	<i>t</i> = 0.6	<i>t</i> = -1.5 ⁺
Relationship management	Inspirational leadership	3.8–3.9	3.9–4.0	3.9–3.9	4.1–4.1	3.9–4.0
		<i>t</i> = -1.6 ⁺	<i>t</i> = -1.7 [*]	<i>t</i> = -1.4 ⁺	<i>t</i> = -1.5 ⁺	<i>t</i> = -3.2 ^{**}
	Conflict management	3.9–4.0	3.8–3.9 ^a	3.8–3.9	4.1–4.1	3.9–4.0
		<i>t</i> = -1.9 [*]	<i>t</i> = -2.9 ^{**}	<i>t</i> = -1.5 ⁺	<i>t</i> = -0.2	<i>t</i> = -3.5 ^{***}
	Influence	3.9–4.0	3.9–4.1	3.9–4.0	4.1–4.1	3.9–4.1
<i>t</i> = -2.8 ^{**}		<i>t</i> = -3.4 ^{**}	<i>t</i> = -2.6 ^{**}	<i>t</i> = -1.5 ⁺	<i>t</i> = -5.1 ^{***}	
Coach and mentor	3.9–3.9	3.9–3.9	3.9–3.8	4.1–4.1	3.9–4.0	
	<i>t</i> = -0.7	<i>t</i> = -0.03	<i>t</i> = 1.5 ⁺	<i>t</i> = 0.4	<i>t</i> = -1.4 ⁺	
Teamwork	4.2–4.2	4.3–4.3	4.2–4.2	4.4–4.3	4.2–4.3	
	<i>t</i> = 0.8	<i>t</i> = 0.06	<i>t</i> = 0.4	<i>t</i> = 1.9 ⁺	<i>t</i> = -1.6 ⁺	
Cognitive	Systems thinking	3.8–3.9	3.7–3.9 ^a	3.9–4.0	4.0–4.2	3.9–4.1
		<i>t</i> = -1.9 [*]	<i>t</i> = -4.3 ^{***}	<i>t</i> = -2.5 ^{**}	<i>t</i> = -3.3 ^{***}	<i>t</i> = -5.6 ^{***}
	Pattern recognition	3.8–3.9	3.9–4.0	3.8–4.0	4.0–4.1	3.9–4.1
		<i>t</i> = -1.7 ⁺	<i>t</i> = -5.1 ^{***}	<i>t</i> = -3.4 ^{***}	<i>t</i> = -3.1 ^{**}	<i>t</i> = -6.5 ^{***}

Note: Matched-pair *t*-tests were run because a longitudinal design was used. Significance levels are one-tailed: ⁺*p* < 0.10; ^{*}*p* < 0.05; ^{**}*p* < 0.01; ^{***}*p* < 0.001

^aScales for empathy, conflict management, and systems thinking were adjusted to account for item changes between version 1 and version 2 of the ESCI-U

^bEntering and graduating scores were rounded to one decimal point. This created visual anomalies in significance reported

improvement from the beginning to the end of the MBA program. The results of these *t*-tests for the 2009 through 2013 cohorts are presented in Table 15.2 for informant assessments and in Table 15.3 for self-assessments. To facilitate the interpretation of these results in the context of earlier cohorts, Tables 15.4 and 15.5 present patterns of change observed over the entire duration of the WSOM longitudinal project, organized in terms of the competencies measured in the ESCI-U.

Table 15.3 Comparison of full-time MBA students' entering and graduating scores on the ECI-U and ESCI-U – self-assessment

Cluster	Scale	2007– 2009	2008– 2010	2009– 2011	2010– 2012	2011– 2013
		<i>N</i> = 37	<i>N</i> = 52	<i>N</i> = 56	<i>N</i> = 50	<i>N</i> = 39
Self-awareness	Emotional self-awareness	3.9–4.0	3.9–4.0	3.9–4.0	3.9–4.1	4.0–4.1
		<i>t</i> = -0.6	<i>t</i> = -1.7*	<i>t</i> = -1.1	<i>t</i> = -1.9*	<i>t</i> = -1.2
Self-management	Emotional self-control	4.0–3.9	3.7–3.9	3.8–3.9	3.9–4.1	3.8–4.1
		<i>t</i> = 0.8	<i>t</i> = -1.7*	<i>t</i> = -0.7	<i>t</i> = -1.9*	<i>t</i> = -2.9**
	Achievement orientation	3.9–4.2	4.1–4.3	4.1–4.2	4.1–4.1	4.1–4.2
		<i>t</i> = -2.7**	<i>t</i> = -2.1*	<i>t</i> = -0.2	<i>t</i> = -0.1	<i>t</i> = -0.4
	Adaptability	4.0–4.1	3.8–4.0	3.9–4.0	3.9–4.1	4.0–4.1
		<i>t</i> = -1.0	<i>t</i> = -2.5**	<i>t</i> = -0.7	<i>t</i> = -1.7*	<i>t</i> = -1.1
	Positive outlook	4.2–4.1	3.9–4.0	4.0–4.1	4.1–4.2	4.0–4.2
		<i>t</i> = 1.4+	<i>t</i> = -1.9*	<i>t</i> = -1.0	<i>t</i> = -1.3	<i>t</i> = -2.3*
Social awareness	Empathy	4.1–4.1	4.1–4.1 ^a	4.1–4.1	4.1–4.2	4.1–4.2
		<i>t</i> = 0.6	<i>t</i> = -0.4	<i>t</i> = -0.3	<i>t</i> = -1.1	<i>t</i> = -0.6
	Organizational awareness	4.0–4.3	4.1–4.3	4.1–4.1	4.1–4.2	4.1–4.2
		<i>t</i> = -1.9*	<i>t</i> = -2.4*	<i>t</i> = 0.1	<i>t</i> = -1.4+	<i>t</i> = -0.7
Relationship management	Inspirational leadership	3.6–3.8	3.7–3.8	3.6–3.7	3.7–3.9	3.8–3.8
		<i>t</i> = -1.6+	<i>t</i> = -1.4+	<i>t</i> = -0.9	<i>t</i> = -1.8*	<i>t</i> = -0.6
	Conflict management	3.9–3.8	3.7–3.8 ^a	3.7–3.6	3.7–3.9	3.8–3.8
		<i>t</i> = 0.4	<i>t</i> = -0.87	<i>t</i> = 1.2	<i>t</i> = -1.6+	<i>t</i> = 0.5
	Influence	3.6–4.0	3.8–4.0	3.7–3.9	3.7–4.1	3.9–4.0
		<i>t</i> = -2.5**	<i>t</i> = -1.5+	<i>t</i> = -1.3	<i>t</i> = -2.9**	<i>t</i> = -1.4+
	Coach and mentor	3.7–3.8	3.7–3.7	3.5–3.6	3.6–3.8	3.7–3.8
		<i>t</i> = -0.9	<i>t</i> = -1.0	<i>t</i> = -0.9	<i>t</i> = -1.8*	<i>t</i> = -0.6
	Teamwork	4.2–4.1	4.2–4.3	4.2–4.1	4.2–4.2	4.0–4.2
		<i>t</i> = 0.5	<i>t</i> = -0.65	<i>t</i> = 0.4	<i>t</i> = -0.1	<i>t</i> = -2.0*
Cognitive	Systems thinking	3.8–3.8	3.5–4.0 ^a	3.7–3.9	3.8–4.0	3.8–4.0
		<i>t</i> = -0.1	<i>t</i> = -3.7**	<i>t</i> = -2.2*	<i>t</i> = -1.9*	<i>t</i> = -1.9*
	Pattern recognition	3.7–4.0	3.8–4.0	3.7–3.8	3.8–4.0	3.8–4.0
		<i>t</i> = -2.3*	<i>t</i> = -1.8*	<i>t</i> = -0.7	<i>t</i> = -1.7*	<i>t</i> = -2.8**

Note: Matched-pair *t*-tests were run because a longitudinal design was used. Significance levels are one-tailed: +*p* < 0.10; **p* < 0.05; ***p* < 0.01; ****p* < 0.001

^aScales for empathy, conflict management, and systems thinking were adjusted to account for item changes between version 1 and version 2 of the ESCI-U

^bEntering and graduating mean scores were rounded to one decimal point. This created visual anomalies in significance reported

Competencies that were consistently improved One of the most robust findings that emerged across all cohorts (including baseline pre-LEAD cohorts) and reflected in both informant ratings and self-assessments (with only one or two exceptions) was that MBA students were graduating with increased CI competencies of systems thinking and pattern recognition. Since MBA courses and

Table 15.4 Patterns of competency improvement by cohort – informant assessment

Cluster	Competency	1990–1996 ^a	1999–2001	2002–2004	2003–2005	2004–2006	2006–2008	2007–2009	2008–2010	2009–2011	2010–2012	2011–2013
EI	Emotional self-awareness	na	na	na	*	–	*	+	*	*	+	*
	Emotional self-control	*	*	*	*	*	*	–	*	*	*	*
	Achievement orientation	*	*	*	*	*	*	–	–	–	–	*
	Adaptability	na	*	*	*	*	+	–	*	*	*	*
	Positive outlook	na	na	na	*	*	+	–	*	–	–	*
	Empathy	*	*	*	*	*	*	*	*	*	–	*
	Organizational awareness	na	na	na	–	–	–	–	–	–	–	+
SI	Inspirational leadership	na	na	na	–	–	*	+	*	+	+	*
	Conflict management	+	*	*	*	*	*	*	*	+	–	*
	Influence	+	*	*	*	*	*	*	*	*	+	*
	Coach and mentor	+	*	*	–	–	–	–	–	+	–	+
	Teamwork	*	*	*	–	–	+	–	–	–	+	+
	Systems thinking	*	*	*	*	*	*	*	*	*	*	*
	Pattern recognition	*	*	*	*	*	*	+	*	*	*	*

Note: EI emotional intelligence, SI social intelligence, CI cognitive intelligence

* = significant improvement ($p < 0.05$); + = some evidence of improvement (near-significant, $p < 0.10$); – = no significant improvement ($p > 0.10$); na = not assessed

^aData collected in 1990–1996 were analyzed using both informant assessments and behavior coded from critical incident interviews and video-taped simulations (these were only collected during this time period)

Table 15.5 Patterns of competency improvement by cohort – self-assessment

Cluster	Competency	Pre-1990 ^a	1990–1996	1999–2001	2002–2004	2003–2005	2004–2006	2006–2008	2007–2009	2008–2010	2009–2011	2010–2012	2011–2013
EI	Emotional self-awareness	na	na	na	na	–	–	+	–	*	–	*	–
	Emotional self-control	na	na	*	*	*	*	*	–	*	–	*	*
	Achievement orientation	+	*	*	*	*	–	*	*	*	–	–	–
	Adaptability	na	na	*	*	*	*	*	–	*	–	*	–
	Positive outlook	na	na	na	na	–	+	*	–	*	–	–	*
	Empathy	–	+	*	*	–	*	+	–	*	–	–	–
	Organizational awareness	na	na	na	na	–	+	+	*	*	–	+	–
SI	Inspirational leadership	–	*	na	na	*	*	*	+	+	–	*	–
	Conflict management	na	na	*	*	*	*	–	–	–	–	+	–
	Influence	na	na	*	*	*	+	+	*	+	–	*	+
	Coach and mentor	–	*	–	*	*	*	–	–	–	–	*	–
	Teamwork	na	na	–	*	–	–	–	–	–	–	–	*
	Systems thinking	*	*	–	*	*	*	*	–	*	*	*	*
	Pattern recognition	+	*	*	*	*	*	*	*	*	–	*	*

Note: EI emotional intelligence, SI social intelligence, CI cognitive intelligence

* = significant improvement ($p < 0.05$); + = some evidence of improvement (near-significant, $p < 0.10$); – = no significant improvement ($p > 0.10$); na = not assessed. ^aAssessments conducted prior to 1990 provide a baseline for comparison

course-based assignments help students develop and practice these and other cognitive competencies, it is not a surprise that these are consistently improved, with or without the LEAD course.

Cohorts that graduated since the introduction of the LEAD course additionally demonstrated reliable gains in two EI competencies of emotional self-control and adaptability and two SI competencies of inspirational leadership and influence, as reflected by both informant ratings and self-assessments (with only few exceptions). Improvements in the two SI competencies are particularly notable because these were among the lowest-rated competencies (by both self and others) at the start of the program. It is possible that new MBA students, who often lack long-term work experience, may have a good theoretical understanding of what visionary leadership entails but lack the self-confidence or the “expertise” to effectively convey their views to others or put their ideas into action. Accordingly, students may explicitly target these competencies as part of their intentional change efforts facilitated by the LEAD course. Although the two EI competencies of emotional self-control and adaptability were not flagged as major weaknesses in the entry assessments, neither did they stand out as major strengths, allowing sufficient room for growth and making them likely targets for intentional change.

Consistent improvements in the LEAD-enriched cohorts (again, with only one or two exceptions) were additionally observed for emotional self-awareness, empathy, and conflict management – but only according to informant assessments; self-reported outcomes for these competencies were much less reliable. Self-perceptions of emotional self-awareness and empathy may have suffered from escalating expectations. As the students learned more and more about their EI and SI competencies from the 360-degree feedback and from working on their Personal Balance Sheet, they may have discovered how little they had in fact understood about themselves and others and tempered their self-evaluations accordingly – a phenomenon known as the Dunning-Kruger effect (Sheldon, Dunning, & Ames, 2014). Indeed, entering MBA students tended to give themselves high scores on emotional self-awareness and especially empathy, whereas informant ratings of these two competencies were much more temperate at the start of the program. Considering these dynamics, the lack of further increase in self-reported emotional self-awareness and empathy is in fact a desirable outcome: it suggests that MBA students developed more accurate self-perceptions of these fundamental EI and SI competencies by the end of the program.

In contrast, conflict management was among the lowest-rated competencies (by both self and others) at the start of the program, yet despite reliable improvements in the eyes of others, MBA graduates rarely perceived this positive change in themselves. Others may experience people as more flexible and better able to constructively handle conflict than a student feels inside. Internally, he/she may still feel the struggle with change and discomfort with conflict, even if others experience them as more efficacious with these behaviors. When others see the improvements but the students do not, it is an odd situation. Most programs are worried about the opposite effect: the students believe they are perfect and the staff want to help them get

grounded before job interviews. But when students' assessment of progress is considerably lower than what others see, it may lead students to form a negative view of the value of their time in the program. It is a nightmare scenario for development staff who want to appeal to them after they graduate for donations or help with recruiting or placement. This further highlights the value of the ICT framework in competency development and suggests that more time be spent on the front half of the model. Spending time with a student developing a feasible Learning Agenda that includes attainable goals, practical behavioral strategies, and concrete criteria for success will foster more positive expectations about not only their future but themselves and their role in it.

On the whole, informant ratings tended to show more consistent improvements in EI and SI competencies relative to self-assessments. This is notable because external observer ratings of EI competencies appear to be better predictors of actual job performance than self-reports of the same competencies (Amdurer et al., 2014).

Competencies that were not consistently improved The competencies of coach and mentor, organizational awareness, and teamwork showed no consistent improvements from cohort to cohort. This can be attributed in part to ceiling effects, as the latter two competencies were among the highest-rated competencies (by both self and others) at the start of the program. Given how often students are placed in teams in courses and outside activities, it is not surprising that students, peers, and faculty come to believe they are quite good at it. It is also possible that MBA students spend so much time in teams that they come to resent it as a way to work, as some anecdotal evidence suggests. This is in contrast to EMBA students who often graduate learning to love working in teams. The two ingredients in the EMBA missing in most MBA programs are (1) consistent work in the same team (i.e., study group) across semesters and courses throughout the program, which helps with addressing dynamics others can avoid, and (2) assistance in group or team process. A few MBA programs, like Boston University, have used a number of techniques to dramatically reverse this trend in their Team Learning Lab, requiring students to observe from behind a one-way mirror their project teams once a semester, talk about their group process, and write about their interactions in the teams.

The competencies of achievement orientation and positive outlook showed evidence of cohort-specific effects. Compared to earlier cohorts (as reported in Boyatzis et al., 2010), cohorts that graduated in 2009 through 2013 had higher average entry scores across the board on both self-report and informant assessments, with the largest difference being for achievement orientation. Ceiling effects due to higher initial levels of achievement orientation may account for the apparent diminished outcomes for this competency in these later cohorts, especially when compared with the gains reported in earlier cohorts. In discussing the cohort effects, Boyatzis, Passarelli, and Wei (2013) also pointed out the frequent changes in leadership within the School of Management and University:

During the period between 1998 and 2008, there were four sitting Deans and four Interim Deans in the management school, as well as four sitting Provosts, two Interim Provosts, four sitting Presidents and two Interim Presidents at the University level. It is difficult to

contemplate a scenario in which such turnover of leadership helps MBA students develop. Each new Dean, Provost and President comes in with a different style and agenda. There is some tendency to attempt to differentiate themselves from the prior person in that office, as occurs in CEO transitions. (p. 21–22)

Moreover, one cannot ignore the reality that some cohorts, like 2007–2009, entered at the early stages of the global recession and graduated into the worst job market in decades (Boyatzis et al., 2013). Indeed, this “recession” cohort showed an anomalous *decrease* in self-reported positive outlook at graduation.

Conclusion

In this chapter, we have discussed the positive outcomes that focusing attention on competency development and the process of change can have during an MBA program. Using longitudinal data from multiple cohorts of WSOM MBA graduates, we have shown that enriching the MBA curriculum with a course that stimulates each student to develop their own Personal Vision, seek and interpret 360-degree competency feedback to determine their strengths and weaknesses (i.e., their Personal Balance Sheet), and develop and implement a Learning Agenda that builds on their strengths and improves on a few weaknesses to get closer to their vision does correlate with positive gains in a number of competencies that get otherwise overlooked in MBA education. Whether these effects can be directly attributed to the LEAD course or not, the bigger take-home message here is that adults can develop the emotional, social, and cognitive competencies needed to be effective leaders, managers, and professionals.

We have also emphasized the importance of development of all three clusters of competencies (EI, SI, and CI). All three types of intelligence are necessary in the globalized, organizational landscape of today and tomorrow, but none are sufficient without the others. It is the responsibility of the educators of MBA programs to continue to develop these competencies, in addition to functional skills and knowledge, to create well-rounded leaders of the future. It should be noted, however, that while course designs can promote competency development, many of the programmatic components that have the most lasting impact are developmental activities of Experimentation and Practice that are likely experienced outside of the classroom. Therefore, in order to produce sustainable change at the behavioral level, it does require a targeted program design that will not only support the process of intentional change but also instill responsibility in the MBA students for their own competency development.

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Chapter 16

Emotional Intelligence and Post-Secondary Education: What Have We Learned and What Have We Missed?



James D. A. Parker, Robyn N. Taylor, Kateryna V. Keefer,
and Laura J. Summerfeldt

Abstract The transition from high school to a post-secondary setting is a stressful period for most individuals, and difficulties with social and emotional adjustment are strong predictors of student dropout and underachievement. In this context, emotional intelligence (EI) has been studied as a possible explanatory variable for a range of post-secondary adjustment and attainment outcomes. However, the empirical evidence from two decades of research is rather mixed. In this chapter, we summarize the current state of evidence on the links between EI and post-secondary outcomes, review several mediating pathways through which EI may impact these outcomes, and point out important methodological limitations that have confounded research in this area. Using examples from our own research program, we demonstrate that careful treatment of these methodological issues yields informative and promising results. We then discuss a number of practical applications of EI in post-secondary settings, from utilizing EI assessments to improve the delivery of student services to targeted EI interventions.

The transition from high school to a post-secondary setting (whether academic or vocational) is a stressful period for most individuals and one which also coincides with a major developmental transition to young adulthood (Arnett, 2004; Lüdtke, Roberts, Trautwein, & Nagy, 2011). Important markers of the transition to adulthood include completing post-secondary education, living independently, becoming financially self-sufficient, starting a career, and forming a romantic partnership. Rapidly changing technology, increased competition, and globalization of markets of the last few decades have made completing college or university one of the most important milestones of this transition. As employment shifts toward highly skilled and knowledge-intense work, more jobs in the developed world will require

J. D. A. Parker (✉) · R. N. Taylor · K. V. Keefer · L. J. Summerfeldt
Department of Psychology, Trent University, Peterborough, ON, Canada
e-mail: jparker@trentu.ca; robryntaylor@trentu.ca; katerynakeefer@trentu.ca;
lsummerfeldt@trentu.ca

education and skill levels beyond a high school diploma (Jepsen, Troske, & Coomes, 2014; Toutkoushian & Paulsen, 2016). At present in most parts of the developed world, even just attending a college or university for a short period of study appears to have important future economic benefits (Xu & Trimble, 2016).

Given this importance for future quality of life, it is not surprising that the transition from high school to a post-secondary environment is perceived as a stressful experience by most students (Pascarella & Terenzini, 2005). It is likely that the stress levels experienced during this period contribute to low retention rates observed in many universities and colleges. For much of the last few decades, these rates have been highly stable: almost half of the students in Canada and the United States who start their post-secondary studies after high school will withdraw from the institution before completing their program of study (Ross et al., 2012; Shaiens, Gluszynski, & Bayard, 2008).

A key reason for this trend in dropout rates is that post-secondary students face a bewildering set of evolving personal and interpersonal challenges (Pascarella & Terenzini, 2005) – challenges that may become compounded if post-secondary students attend college or university away from their home towns (Witkow, Huynh, & Fuligni, 2015). Not only must they modify existing relationships with friends and family, but students making the transition from high school to university or college need to adapt to a dynamic learning environment – one that evolves substantially from first year to upper years of study (Fussell, Gauthier, & Evans, 2007). Compared to the experience of earlier generations of post-secondary students, higher financial costs add even more complexity to this transition. Increased tuition costs mean that increasing numbers of students need to balance school and work-related activities (Moulin, Doray, Laplante, & Street, 2013); rising tuition costs also put added pressure on families and complicate a set of family dynamics already under stress as older adolescents “toil” to become independent young adults (Fingerman et al., 2012; Kins, Soenens, & Beyers, 2013).

Traditionally, researchers studying post-secondary achievement and persistence have relied on a roster of demographic and academic variables such as gender, socioeconomic status, aptitude tests, and high school performance (Tinto, 1993). More recently, models of student success and persistence recognize the importance of a more complex network of variables connected to student engagement and motivation, as well as emotional and interpersonal adjustment (Pascarella & Terenzini, 2005; Robbins, Allen, Casillas, Peterson, & Le, 2006; Rowan-Kenyon, Savitz-Romer, Ott, Swan, & Liu, 2017). Among these more recent predictor variables is the construct of emotional intelligence (EI), which has held the attention of educational researchers for several decades now (Salovey & Sluyter, 1997).

Broadly defined, EI encompasses social and emotional competencies related to perceiving, understanding, utilizing, and managing emotions in self and others, although precise operational definitions of these competencies vary from model to model (for a review see Stough, Saklofske, & Parker, 2009). Mayer, Caruso, and Salovey (1999), for example, are representative of theorists who define the EI construct as a set of intelligence-like abilities, assessed with performance-based tests where individuals solve problems designed to estimate their maximal level of

emotional knowledge (see Chap. 2 by Fiori & Vesely-Maillefer, this volume). Researchers like Bar-On (1997, 2000) and Petrides (2010), on the other hand, conceptualize the EI construct as a set of emotion-related personality dispositions that can be measured with self-report questionnaires designed to tap into individuals' typical behaviors, beliefs, values, and self-concepts (see Chap. 3 by Petrides, Sanchez-Ruiz, Siegling, Saklofske, & Mavroveli, this volume). It is important to note that both the ability EI and trait EI theoretical perspectives have influenced the field with respect to understanding post-secondary achievement.

In this chapter, we summarize the current state of evidence on the links between EI and post-secondary outcomes, review several mediating pathways through which EI may impact these outcomes, and point out important methodological limitations that have confounded research in this area. Using examples from our own research program, we demonstrate that careful treatment of these methodological issues yields informative and promising results. We then discuss a number of practical applications of EI in post-secondary settings, from utilizing EI assessments to improve the delivery of student services to targeted EI interventions.

What Do We Know About EI and Post-secondary Success?

Although both ability EI and trait EI have been linked with important academic outcome variables, the trait approach would appear to have generated the largest body of work. In a recent meta-analysis of 47 independent effect sizes based on data from approximately 8700 participants, Perera and DiGiacomo (2013) found a low-to-moderate validity coefficient ($r = 0.20$) for the link between trait EI and academic achievement across all educational levels, although the effect size was weaker at the post-secondary level ($r = 0.18$) compared to primary school level ($r = 0.28$). As noted by Perera (2014), “this mean effect size for the TEI-academic performance relation not only exceeds effects obtained for extraversion, neuroticism, agreeableness and openness but also approaches the effects observed for conscientiousness in comparable meta-analytic designs” (p. 137).

Although encouraging, the results from this meta-analysis can only be suggestive, since many of the empirical studies included have a number of methodological limitations (Parker, Saklofske, Wood, & Collin, 2009). Notably, previous research on the link between post-secondary achievement and EI has typically assessed academic success over quite narrow timelines (e.g., a single academic term), or compromised the interpretability of results by combining into common datasets full-time and part-time students, young adults and mature students, and students at different stages of the transition process (e.g., first year students with students about to graduate). The types of stressors and the competencies needed to cope with them would be rather different across these diverse student subgroups. Academic success is usually operationalized as a cumulative grade point average (GPA), and more frequently than not, it is assessed via self-report. The latter approach is quite problematic, because self-reported grades are subject to known

systematic biases (Kuncel, Credé, & Thomas, 2005). Moreover, the preoccupation with GPA misses opportunities to explore broader features of academic success like engagement, learning, persistence, and time-to-graduation rates (Parker et al., 2009). It is also important to note that the broad range of trait EI measures included in meta-analyses, like the one performed by Perera and DiGiacomo (2013), taps a heterogeneous set of EI-related constructs, assessed with varying degrees of reliability and validity. Total EI in this context is quite broad relative to the more limited and homogeneous sets of measures typically used in meta-analyses of other predictors like neuroticism, conscientiousness, or openness to experience (Richardson, Abraham, & Bond, 2012).

The relationship between EI and post-secondary success has produced much more inconsistent results when ability EI measures have been used compared to studies using trait EI measures. With a few exceptions (e.g., Amelang & Steinmayr, 2006; MacCann REF), most of the ability EI research has utilized the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002). Although Chew, Zain, and Hassan (2013) found a low but significant association between GPA and ability EI, Lanciano and Curci (2014) and MacCann, Fogarty, Zeidner, and Roberts (2011) reported moderate associations for the same variables. The majority of published work using the MSCEIT, however, has generally failed to find a link between ability EI and academic success in post-secondary students (Barchard, 2003; Bastian, Burns, & Nettlebeck, 2005; O'Connor & Little, 2003; Rode et al., 2007; Rossen & Kranzler, 2009). It is quite likely that methodological limitations in studies using ability measures of EI have contributed to the inconsistent results. Virtually all of this published work used blends of student populations (e.g., students at different years of study; mature and young students) and narrow time frames for measuring academic success. MacCann et al. (2011), for example, who report some of the strongest associations between ability EI and academic success, used a sample of post-secondary students who ranged in age from 17 to 56 years attending five different community colleges. They also used only self-reported GPA.

What we can say definitively about the relationship between EI and academic success in post-secondary students is that the topic has spawned a large literature (Perera & DiGiacomo, 2013; Richardson et al., 2012). As a whole, these results are mixed – the likely result of a broad range of methodological shortcomings. If we take a closer look at work that has attempted to account for some of these shortcomings, the evidence seems to suggest that trait EI is at least a moderate predictor of academic success in post-secondary students. A case in point is the series of studies conducted by the authors (and various collaborators) over the past 15 years as part of the Trent Academic Success and Wellness Project (TASWP; Parker, Summerfeldt, Hogan, & Majeski, 2004). This work draws heavily on Bar-On's (1997) multidimensional trait EI model, which outlines four core EI dimensions: intrapersonal (self-awareness and understanding of one's own emotions), interpersonal (empathy and responsiveness to other's emotions), adaptability (emotional flexibility in the face of challenge and change), and stress management (resilience and regulation of strong negative emotions). An important reason for using this model is the availability of reliable and valid parallel measures of trait EI for

different age groups, namely, the Emotional Quotient Inventory-Short Form (EQi:S; Parker, Keefer, & Wood, 2011) for adults and the EQi-Youth Version (EQi-YV; Bar-On & Parker, 2000) for children and adolescents (although only the work with post-secondary samples is reviewed in the next section; for review of trait EI in secondary school settings, see Chap. 3 by Petrides et al., this volume).

Trent Academic Success and Wellness Project (TASWP)

The objective of the TASWP was to evaluate the prospective utility of trait EI for predicting academic achievement and persistence of students undergoing the transition from high school to university. Four consecutive cohorts of newly registered full-time undergraduate students at a medium-sized Canadian university (3500 students in total) were recruited university-wide at the start of the academic year. The study participants were homogeneous with respect to their age (under 25 years), academic background (within the last 2 years of graduation from high school), and enrollment status (full time only). Participants were asked to complete the EQi:S and provide consent for us to obtain their high school grades and track their subsequent degree progress via official university records. At the end of the first academic year, students' EQi:S scores were matched with their official academic standing (succeeded vs. failed) and registration status for second year (persisted vs. withdrew). Results showed that, despite having comparable age, course load, and high school grades, students who entered university with lower trait EI were significantly more likely to fail academically (Parker et al., 2004) or withdraw from the university entirely (Parker, Hogan, Eastabrook, Oke, & Wood, 2006) than their higher trait EI peers. These original TASWP findings have been since independently replicated and extended by other research groups with university samples from the United States (Parker, Duffy, Wood, Bond, & Hogan, 2005), England (Qualter, Whiteley, Morley, & Dudiak, 2009), Scotland (Saklofske, Austin, Mastoras, Beaton, & Osborne, 2012), and Cyprus (Sanchez-Ruiz, Mavroveli, & Poullis, 2013).

To better understand the impact of trait EI on students, transition from a secondary to a post-secondary environment, Summerfeldt, Kloosterman, Antony, & Parker (2006) used the TASWP dataset to examine the relationship between trait EI and social interaction and performance anxieties and their combined impact upon interpersonal adjustment in the first few weeks of the students' post-secondary experience. Trait EI was found to be highly related to social interaction anxiety, but less so to performance anxiety. With respect to predicting interpersonal adjustment, a major factor linked to student persistence (Napoli & Wortman, 1996), trait EI was the dominant predictor (explaining 64% of the variability in adjustment scores), reducing the unique contribution made by the two social anxiety variables to marginal levels (neither one explaining more than 3–4% of the variability).

As noted earlier, one of the limitations of the research on the link between EI and academic success is the limited time frame used to study academic success. Parker, Saklofske, Wood, Eastabrook, and Taylor (2005) examined the long-term stability

of trait EI over several years in one of the TASWP cohorts, as well as the impact of the transition from high school to university on trait EI levels. Approximately 32 months after completing the EQi:S during the first week of their start at university, a random subset of the TASWP students ($N = 238$) completed the measure for a second time. Consistent with the maturity principle that trait EI should increase with age, students' trait EI scores showed significant improvements over the 3-year period. Interestingly, this positive change in trait EI was more than could be attributed to the increased age of the participants, suggesting that successfully transitioning to university and completing several years of post-secondary education can have added benefits for students' emotional maturation (Parker, et al., 2005). A similar life experience effect was recently reported by Schutte (2014), who found that living in a college residence characterized by a higher collective trait EI level resulted in larger increases in trait EI for the individual residents. This set of findings underscores the importance of post-secondary education for socioemotional development in addition to academic qualifications.

The TASWP database was subsequently used to examine the long-term utility of trait EI for predicting students' degree completion outcomes (Keefer, Parker, & Wood, 2012). University records of the first two cohorts of participants were accessed to obtain their registration status (graduated vs. withdrew) at a 6-year follow-up. By that time, 86% of the participants had successfully graduated, whereas the remaining 14% had left without completing their studies. The greatest vulnerability for degree non-completion was associated with a combination of low overall trait EI level and a notable absence of perceived individual strengths in any particular trait EI domain. Interestingly, having at least one solid area of personal strength (e.g., interpersonal abilities or stress management) appeared to offset the negative effects of deficits in other areas. An independent corroboration of the role of specific trait EI dimensions in predicting graduation rates has been found by UK researchers (Pope et al., 2012).

In the most recent follow-up with the TASWP dataset, Parker, Saklofske, and Keefer (2016) examined the academic success of 171 gifted students in the sample (i.e., exceptionally high-achieving students with a high school GPA of 90% or better). The gifted students who entered university with lower trait EI scores were significantly less likely to graduate with a degree 6 years later, compared to their gifted peers with high trait EI. As an interesting secondary finding, Parker et al. (2016) also found that the gifted students did not differ from their non-gifted peers on trait EI. This result is not that surprising, since the trait EI measure used in the TASWP (EQi:S) was designed to correlate only weakly with cognitive intelligence (Bar-On, 2002). What is more notable is that trait EI is equally predictive of post-secondary attainment for all students, regardless of their cognitive intelligence or exceptional academic ability.

The study by Parker et al. (2016) on trait EI and giftedness is part of a growing body of work exploring the relationship of EI with various academic variables in specific subgroups of students and types of academic programs. We review this promising research next.

Specific Post-Secondary Populations

Among the first post-secondary subgroups to receive special attention with regard to the link between EI and academic success were students in business programs (Boyatzis & Saatcioglu, 2008). Rozell, Pettijohn, and Parker (2002), for example, using samples of undergraduate and graduate business students, found a significant relationship between various trait EI dimensions and academic performance (GPA). Fall, Kelly, MacDonald, Primm, and Holmes (2013), taking the view that the undergraduate curriculum in business schools needs to foster a cross section of emotional and social competencies, examined the link between trait EI and intercultural communication skills. A variety of trait EI dimensions significantly predicted less intercultural communication apprehension in a large sample of business students. This work is part of a rich literature on EI and success in MBA education; one such program of research is highlighted in Chap. 15 by Boyatzis and Cavanagh (this volume).

The importance of EI in teacher education is another area which has produced a rich literature (see Chap. 14 by Vesely-Maillefer & Saklofske, this volume), suggesting that various EI-related abilities are essential to successful teacher training outcomes (Dolev & Leshem, 2017). EI-related abilities have also been identified as critical skills for students in professional programs as diverse as accounting (Durgut, Gerekan, & Pehlivan, 2013), architecture (Erbil, 2015), engineering (Lappalainen, 2015; Lopes, Gerolamo, Del Prette, Musetti, & Prette, 2015), law (Silver, 1999), and pharmacology (Romanelli, Cain, & Smith, 2006).

Perhaps one of the largest literatures with a specific post-secondary subgroup has developed on the various EI-related abilities linked to success in medical school and related programs (Mintz & Stoller, 2014). Not surprisingly, a number of medical schools have begun to use EI measures to evaluate the performance of individuals entering the health profession system (Talarico et al., 2013). A similar trend can be found in the evolving literature in dentistry (Hannah, Lim, & Ayers, 2009; Victoroff & Boyatzis, 2013), nursing (Fernandez, Salamonson, & Griffiths, 2012; Holston & Taylor, 2016), and other specialized medical professions like psychiatry (Schrimpf & Trief, 2013), surgery (Chan, Petrisor, & Bhandari, 2014), anesthesiology (Talarico, Metro, Patel, Carney, & Wetmore, 2008), and radiography (Mackay, Hogg, Cooke, Baker, & Dawkes, 2012).

Does EI predict success in training to become a doctor, dentist, or nurse? As with other areas of post-secondary achievement, clear generalizations are often hard to make, since research in this area has many of the same methodological shortcomings described earlier with respect to the research on post-secondary success in general populations including academic success variables assessed over narrow timelines (e.g., a single term) and the interpretability of results compromised by combining heterogeneous groups of students (full-time with part-time students, older with younger learners, sophomores with senior students). Furthermore, the distinction between ability and trait measures of EI is often not appreciated in this area. For example, in a recent review on the relationship between EI and success in medical

school, the authors did not differentiate between trait and ability EI measures (Arora et al., 2010). Given the disparate links between EI and academic success typically found with trait versus ability measures, the lack of conceptual differentiation has the potential to create considerable confusion when it comes to evaluating EI-related research. For example, most of the existent work using EI to predict academic success in medical school has used the MSCEIT (see, Patterson et al., 2016), with a large number of studies reporting low or nonsignificant correlations with ability EI (Carr, 2009; Chew et al., 2013; Humphrey-Murto, Leddy, Wood, Puddester, & Moineau, 2014; Leddy, Moineau, Puddester, Wood, & Humphrey-Murto, 2011). Doherty, Cronin, and Offiah (2013), for example, found no significant association between the total MSCEIT score and academic success in medical school. However, they also included a trait EI measure (EQi) and found that total trait EI was a significant moderate predictor of academic success for preservice educators.

Why Should Trait EI Predict Academic Achievement?

Along with academic success variables, trait EI has been consistently linked to a number of other positive outcomes in post-secondary students, including fewer physical fatigue symptoms (Brown & Schutte, 2006; Thompson, Waltz, Croyle, & Pepper, 2007), better overall adjustment and life satisfaction (Saklofske, Austin, & Minski, 2003), and less social anxiety and loneliness (Summerfeldt, Kloosterman, Antony, & Parker, 2006). Overall, it would appear that students who have higher trait EI experience more constructive and fewer maladaptive coping strategies (Austin, Saklofske, & Mastoras, 2010; Saklofske, Austin, Galloway, & Davidson, 2007). Not only is it important to be able to document empirically the relationship between EI and academic success, but it is also equally important to be able to explicitly account for the mechanisms underlying this relationship. “The failure to sufficiently elaborate theoretical links of [trait] EI with various life outcomes in line with the complexity of the construct may not only obfuscate the true nature of the construct but also complicate empirical research efforts” (Perera, 2016, p. 231). Based on conceptual models proposed by Perera (2016) and Corcoran and Slavin (2016), several mechanisms can be put forward for the empirical link found in the literature between trait EI and academic success in individuals of various ages.

Coping with Stress

Coping with stress is one of the chief mechanisms that has been proposed to mediate the links between trait EI and a range of student behaviors (Keefer, Parker, & Saklofske, 2009). This rich literature is reviewed extensively elsewhere in this book (see Chap. 4 by Zeidner & Matthews, this volume); here, we will focus on some of the other, less well-elaborated factors.

Cognitive Factors

Attention, self-control, planning, and decision-making are all critical cognitive processes in purposeful, goal-directed behavior (Shonkoff & Phillips, 2000). As noted by Derryberry (2002), the ability to comply with rules, to put off or delay an activity, as well as to monitor behavior to match changing environmental demands is often referred to as “executive control.” Given the cognitive tasks involved, it is not surprising that Zimmerman and Kitsantas (2005) found executive control to account for the vast majority of variance in students’ performance on standardized achievement tests. Emotional and social competencies play a key role in the efficacy of executive control (Elias & Haynes, 2008), as students who are better able to control impulses or sustain focus are more likely to have higher academic performance. Students with high trait EI may be better able to stay focused and use attention in the service of learning during the stress and strain of post-secondary studies (Rhoades, Warren, Domitrovich, & Greenberg, 2010). For individuals with lower levels of trait EI, on the other hand, negative affect may be more likely to get them “offtrack” and promote distracting behaviors (Valiente, Swanson, & Eisenberg, 2012).

Motivational Factors

One of the core features of trait EI models is the assumption that people high in trait EI are typically more optimistic than individuals low on the trait (e.g., Bar-On, 2000; Petrides & Furnham, 2001). Being predisposed to optimism is hypothesized to have a critical motivating capacity, as the ability to remain positive despite perceived setbacks, uncertainty, and boredom has been found to predict a number of work and school-related outcomes (Zeidner, Matthews, & Roberts, 2012). Several meta-analytic studies present fairly solid evidence that people high on trait EI experience more optimism than people lower on the trait (Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016; Schutte, Malouff, Thorsteinsson, & Bhullar, 2007). Post-secondary students with high trait EI may be better able to stay engaged with their studies because, on a day-to-day basis, they have more positive beliefs about the future – a state of mind that has been linked with increased efforts to reach desired academic goals (Carver & Connor-Smith, 2010; Nes & Segerstrom, 2006). Students who experience more positive emotions are often more engaged in their learning activities, whereas individuals who tend to experience less positive emotions are often less engaged (Linnenbrink, 2007).

Interpersonal Factors

One of the characteristics shared by all EI models, both trait and ability, is that the construct is to a large part defined by a cluster of interpersonal competencies (Bar-On, 1997; Petrides, 2010): recognizing, understanding, and appreciating how

other people feel; being able to articulate an understanding of another person's perspective and behaving in a way that respects the other person's feelings; and skills in developing and maintaining mutually satisfying relationships. The ability to establish and maintain a satisfying romantic relationship requires the capacity to identify emotions, as well as the ability to self-disclose these emotions to a partner (Carton, Kessler, & Pape, 1999; Meeks, Hendrick, & Hendrick, 1998). The ability to understand and empathize with the feelings of one's partner is also critical to positive relationships (Wachs & Cordova, 2007). Post-secondary students with low trait EI, who have problems identifying and understanding their emotions, as well as communicating these experiences to others, are less likely to turn to other people for emotional support. Not only are they more likely to feel alienated and disconnected from life on campus – a leading predictor of dropout (see Wilcox, Winn, & Fyvie-Gauld, 2005) – but they are also more likely to be disadvantaged in many academic contexts. As others have noted, success in post-secondary environments is not just linked with individual achievement but also with one's ability to work collaboratively with others (Wang, MacCann, Zhuang, Liu, & Roberts, 2009).

It is important to emphasize that the coping, cognitive, motivational, and interpersonal mechanisms are interrelated, and much of the impact of trait EI on academic success may be indirect, mediated by these other variables. As noted by Perera and DiGiacomo (2015), people high on trait EI may be more engaged with their academic activities because they can mobilize greater effort in the face of adversity, as well as better offset the negative influence of various types of emotionally distracting situations – a profile of student behavior typically linked with the successful transition to a post-secondary learning environment (Credé & Niehorster, 2012).

Implications of EI for Student Support Services

Given the evidence presented earlier in this chapter that trait EI significantly predicts various educational outcomes in post-secondary students, a number of implications can be identified with respect to post-secondary education. Student retention programs are probably the most obvious application for information regarding student trait EI levels, but before exploring the implications for these types of programs, it is worth exploring other places on campus where trait EI information might prove quite useful.

Learning Assistance Programs

Virtually every university and college has learning assistance centers designed to provide students with a variety of academic supports (Wurtz, 2015). These institutional supports generally offer academic enhancement activities, study skills assistance, and support for a cross section of academic disciplines (Perin, 2004). It is

important to note that many study-related behaviors are readily compromised by poor coping behaviors and problematic stress management skills – a profile connected to individuals with low trait EI levels (Valiente et al., 2012). Thus, individuals working with students in the context of improving academic skills may want to routinely assess potential low trait EI areas in their clients. In addition, a common challenge for individuals managing learning assistance resources is that only a small number of students who might benefit from learning support utilize these resources (Higbee, Arendale, & Lundell, 2005). Trait EI assessment tools could be used to screen for students likely to benefit from learning assistance programs and implement additional outreach activities for this group.

Career Counseling

Another application where information about trait EI might be particularly useful is in the area of career counseling. A critical factor in post-secondary retention is the student perceptions about the value of their programs and degrees, as well as the ability to see potential links to employment opportunities after graduation (Allen & Robbins, 2010; Fong et al., 2016). Not surprisingly, most universities and colleges have invested in career counseling resources, including opportunities for students to complete various types of vocational interest assessments (Gore & Metz, 2008). Students are often encouraged to use the feedback from these assessment tools as part of career planning activities (i.e., identifying potential career strengths and by implication career “weaknesses”). As part of career readiness programming, university- and college-based career centers may also want to give students opportunities to assess their trait EI profiles. Indeed, EI competencies and other “soft” skills are viewed by many employers as valuable assets (see Chap. 13 by Di Fabio & Saklofske, this volume).

Health Services

A recent comprehensive study of mental health issues in post-secondary students in 21 countries found that mental disorders are exceedingly common (Auerbach et al., 2016). The authors of this cross-cultural study found that almost 20% of students had experienced a serious mental health problem in the previous 12 months, with the vast majority of problems having an onset before the individuals had started college or university. It is also noteworthy that for the majority of students the mental health problems had gone untreated. Not surprisingly, Auerbach et al. (2016) also found that the presence of mental health problems was a significant predictor of student attrition. This poses a number of resource issues for post-secondary institutions, given the strong evidence that mental health problems are on the rise in undergraduate populations (Beiter et al., 2015; Stewart, Moffat, Travers, & Cummins, 2015).

In response to these demographic trends, universities and colleges have been advised to provide better access to mental health services, as well as to focus priorities on fostering better resilience in post-secondary students (Bilodeau & Meissner, 2016; Eisenberg, Lipson, & Posselt, 2016). The lack of resilience has been proposed as a major contributor to the rising rates of mental health problems in post-secondary students (see also Hartley, 2010, 2013). In response, increasing numbers of post-secondary institutions have invested in programs designed to teach or promote improved stress management and coping behaviors – core factors not only in trait EI but also in most resilience models (Steinhardt & Dolbier, 2008). As with other student support initiatives discussed above, counseling centers may want to routinely assess trait EI in their clients. Assessing and promoting resilience may provide post-secondary institutions with programming to prevent mental health problems from becoming more serious (Hartley, 2012). As noted earlier in this chapter, the transition to post-secondary study is a stressful event for most students, regardless of pre-existing mental health problems, but it can exacerbate or re-trigger pre-existing conditions.

Another reason that counseling professionals may want to collect information about their students' trait EI levels is the consideration that individuals with low trait EI respond quite poorly to some types of intervention. There is a rich clinical literature on alexithymia pointing to techniques for working with individuals who would score low on typical trait EI measures (for reviews, see Parker, 2005; Taylor, Bagby, & Parker, 1997). In particular, a number of practical issues and concerns arise when using group interventions, a psychoeducational format commonly adopted by campus programs. As noted by McCallum and Piper (1997), the poor interpersonal skills of individuals with low trait EI often generate boredom and frustration in other group members. Information regarding trait EI levels would allow group facilitators to head off potential negative group experiences and to both nurture positive group dynamics and lessen the likelihood that members will drop out.

Sports Programs

Another place on campus where EI may play an important role is the gym (Laborde, Dosseville, & Allen, 2016). There has been a growing interest in EI among coaches and athletes because the construct appears to be connected to both sport coaching efficacy (Barlow & Banks, 2014; Thelwell, Lane, Weston, & Greenlees, 2008) and athlete performance (Meyer & Fletcher, 2006). As noted by Laborde et al. (2016), the link between athletics and EI should not be surprising. Athletics involves situations where the individual has to motivate themselves to address long-term goals through substantial training and preparatory activities. For student athletes the time frame for training may last years, during which they must learn to cope with the stress and strain of competitive pressure while continuing to pursue academic programs. Not surprisingly, many post-secondary athletic programs have begun to utilize psychoeducational programs designed to teach and foster various EI-related competencies in their students (Campo, Laborde, & Mosley, 2016; see also Chap. 11 by Laborde et al., this volume).

EI Interventions

The Work-Readiness Curriculum: Teaching EI to Students

The employability of post-secondary students after their time on campus is a topic of growing importance across the developed world (Jameson, Strudwick, Bond-Taylor, & Jones, 2012; Knight & Yorke, 2003; O’Leary, 2017). It is a complicated issue since the major stakeholders – students, families, institutions, employers, and governments – often have differing timelines and expectations about what skills and abilities are relevant. As noted by Jameson et al. (2012), “it is well documented that the possession of a degree is related to economic prosperity; however, with more people accessing HE [higher education] than ever before and an increasingly dynamic and competitive graduate employment marketplace, the general view is that having a degree is not enough on its own to ensure graduate-level employment” (p. 26). While a plethora of potential skills and abilities have been targeted as critical for employability, it is safe to say that little consensus has appeared to help prioritize innovations for post-secondary officials (O’Leary, 2017).

Given the growing evidence that EI significantly contributes to both occupational and educational performance (Brackett, Rivers, & Salovey, 2011; O’Boyle, Humphrey, Pollack, Hawver, & Story, 2011), it is hardly surprising that there have also been calls that universities and colleges provide programming to develop or enhance EI-related competencies (Seal, Naumann, Scott, & Royce-Davis, 2010; VanderVoort, 2006). A key assumption here is that since EI is also a critical variable in occupational success, post-secondary institutions should think of EI as a set of critical skill their students will need once they graduate. With this broad goal in mind, Seal et al. (2010) developed a broad framework for developing and promoting relevant competencies in post-secondary students. This was proposed using both best practice issues in teaching EI-related competencies (e.g., Boyatzis, Stubbs, & Taylor, 2002), as well as the developmental context of working with emerging adult populations. A similar framework has been proposed more recently by Allen, Shankman, and Miguel (2012) to teach leadership abilities to post-secondary students.

To date, little research has been published on teaching EI-related competencies specifically to post-secondary students, apart from colleges and universities offering full-day workshops or seminars to introduce students or staff to the importance of the topic for educational success (for recent examples, see Allen, Shankman, & Haber-Curran, 2016). As noted by Zeidner, Roberts, and Matthews (2008), these types of brief information-focused sessions are unlikely to lead to substantial changes in EI levels or behavior. Lasting improvement requires multiple sessions spread out over weeks to give participants opportunities to practice and reflect on their enhanced emotional understanding.

To date, there are several published studies that suggest various EI-related competencies can be enhanced using classroom-based psychoeducational instruction. Schutte and Malouff (2002), for example, provided first year post-secondary students with several hours of information and skills training related to EI. They found that students who received the training scored significantly higher on trait EI measures at the end of the academic term. Burgess-Wilkerson, Benson, and Frankforter (2010)

conducted a similar study with undergraduate and graduate students with similar results. Nelis, Quoidbach, Mikolajczak, and Hansenne (2009) tested the efficacy of a brief program (four classes of 2.5 h each) designed to develop competencies derived from the ability EI model proposed by Mayer and Salovey (1997). The programming, which included a blend of readings, short lectures, and group activities, was found to significantly improve several EI abilities. In a longer and more controlled study, Dacre-Pool and Qualter (2012) documented significant improvement in EI (also as per the Mayer and Salovey ability model) in a large group of post-secondary students. Their intervention program consisted of 11 2-h sessions that also used a blend of classroom-based activities. Schutte, Malouff, and Thorsteinsson (2013), in a review of EI-related intervention programs with various types of adult populations, found that the overall effect size for the impact of training on EI was moderate ($g = 0.46$).

The Emotionally Intelligent Professor

The link between EI and effective pedagogy has been the focus of substantial literature (Mortiboys, 2005). This is consistent with work, cited earlier, documenting the importance of EI for a cross section of professions and disciplines (Chan et al., 2014; Holston & Taylor, 2016; Schrimpf & Trief, 2013; Talarico et al., 2008; Victoroff & Boyatzis, 2013). University or college instructors who are higher in EI are often more effective at classroom management. Not only are they more likely than their low EI peers to better recognize and understand their students' emotional experiences, but they are more likely to be skillful in using emotional expressions and nonverbal information to motivate and manage their students' learning (Jennings & Greenberg, 2009). As noted by Armour (2012), individuals who understand the dynamics of a classroom know that without positive emotional engagement the session is likely to be perceived as dull and boring. "Staff can promote student engagement by making their sessions interesting, communicating well and allowing time for questions. This requires EI in the sense of awareness of the interpersonal and intrapersonal factors to help manage emotions" (Armour, 2012, p. 6). In the context of post-secondary initiatives to address student retention problems, a number of writers have suggested that post-secondary institutions need to direct more attention to developing EI-related competencies in both their teaching faculty (Gliebe, 2012; Jennings & Greenberg, 2009; Sharma & Arora, 2012) and administrative staff (Coco, 2011; Dick, 2016; Maxwell, 2017).

Another reason for promoting EI to professors is that teaching can be a stressful and emotionally demanding occupation. The role of EI in both managing stress and promoting psychological resilience suggests that post-secondary institutions may want to provide opportunities for their staff to develop and enhance EI-related competencies. Instructors with high EI "set the tone of the classroom by developing supportive and encouraging relationships with their students, designing lessons that build on student strengths and abilities, establishing and implementing behavioral guidelines in ways that promote intrinsic motivation, coaching students through

conflict situations, encouraging cooperation among students, and acting as a role model for respectful and appropriate communication and exhibitions of prosocial behavior” (Jennings & Greenberg, 2009, p. 492). Given the obvious implications for both professional burnout among faculty and poor retention among students, post-secondary institutions may want to adapt or incorporate EI training programs designed for teacher education and professional development (Vesely, Saklofske, & Leschied, 2013). For example, Gardner, Stough, and Hansen (2008) have developed a set of curriculum materials (workshops, workbooks for home use, and assignments) that focuses on the development of a cross section of EI-related competencies of particular relevance to the educators. The effectiveness of programs like Gardner et al. (2008) suggests that they provide important long-term professional benefits to teachers (Vesely, Saklofske, & Nordstokke, 2014; see also Chap. 14 by Vesely-Maillefer & Saklofske, this volume).

Student Retention and Persistence Programs

All post-secondary institutions in Canada and the United States have developed and implemented retention programs that target students predicted to be at academic risk due to a number of common demographic variables (Berger & Lyon, 2005). Common at-risk groups include being from various ethnic minorities and from lower socioeconomic backgrounds, parents who did not attend college or university, and having the lowest high school GPAs (Habley, Bloom, & Robbins, 2012). While these types of demographic variables certainly predict academic success in many institutions, individuals charged with managing at-risk programs on campus may want to consider using EI assessment tools to identify at-risk individuals. While interventions aimed at increasing EI may have positive implications for many post-secondary students, simply knowing which students have low EI levels may be very useful in itself. One of the key goals of most retention programs is to raise awareness and connect at-risk students to the many existing student support resources available to them on campus. As noted earlier in this chapter, many of these departments, centers, and groups would likely benefit by considering the role of EI in campus life.

Trent Mentoring Project Building on the availability of trait EI information about incoming students from the TASWP (described earlier), a unique mentoring program was conducted with several cohorts of students at the authors’ home institution. As described by Taylor, Philippi, Kristensen, and Wood (2013), the overall goal of the mentoring program was to provide immediate and ongoing support to first year students identified to be “at risk” for dropping out based on their below-average levels of trait EI. The philosophy behind the program was that the longer a student stays in university, the greater their EI improves compared to students who drop out (Parker, Saklofske, et al., 2005). Thus, no explicit EI training or instruction was provided as part of this mentoring program. Rather, staying in university

increases the chance that a student will benefit from the diverse range of learning and socialization opportunities that are already part of typical university experience (Palmer, O’Kane, & Owens, 2009).

All of the students had completed a trait EI measure, the College Achievement Inventory (CAI; Wood, Parker, & Taylor, 2005), before the start of their studies as part of an intake survey conducted by several administrative units (e.g., registrar’s office). The CAI was designed to assess competencies closely aligned with the Bar-On (1997) trait EI model. At-risk students were identified based on low trait EI profiles and were contacted throughout the year by a trained mentor assigned to them. The mentors’ role was to provide peer-based coaching for specific issues experienced by the students, and mentors received formal training on various aspects of intrusive advising: a common strategy in post-secondary programming designed to identify student risk issues and to work dynamically with students to solve problems and reach targeted goals (Abelman & Molina, 2002; Jeschke, Johnson, & Williams, 2001). Mentors made regular contact with the at-risk students via phone and email throughout the year if they continued to be enrolled at the university. During the first year of the program, the mentors took a “triage” approach to their mentees: a key goal was to try to identify students who probably needed to withdraw (at least temporarily) or transfer due to dire family, economic, and/or health issues versus students who were at risk because of generally poor adjustment. The program continued for several consecutive years with most students having the same mentor for more than 1 year.

Initially, there were 778 first year students involved in the student mentoring program: all had started their studies at the university as full-time domestic students (international students were not included) and had graduated high school within the previous 24 months. Based on cutoff scores on the trait EI measure, 480 students were determined to be at risk for academic problems. Of these, 380 were randomly assigned to the mentoring program, and the remaining 100 were to an at-risk control group. The at-risk mentoring group and the at-risk control group did not differ on age or high school GPA.

For students not at risk, the dropout rate between first and second year was 12%; this rate had grown by 28% at the start of the fourth year of their studies (2 years later). For at-risk students in the control group, the dropout rate between first and second year was 28%; this rate had grown to 47% at the start of the fourth year of study. For at-risk students in the mentoring program, the dropout rate between first and second year was 18% (significantly lower than the control group’s 28%); this rate had grown to 33% at the start of the fourth year of study (also significantly lower than the control group; with 47%).

To explain the success of the Trent mentoring program, it is useful to consider a variety of factors. As has been noted by many writers, post-secondary students are at risk for dropping out because of a broad range of factors (Bowen, Chingos, & McPherson, 2009). Thus, the overall efficacy of programs targeting at-risk students often lies in their ability (or inability) to connect specific institutional resources and supports with a student body that has a broad range

of “risk” profiles (DeAngelo, 2014; Martin, 2015). For example, programs providing learning assistance may be somewhat irrelevant to help retain students who are at risk because of housing or roommate issues. On the other hand, expanded career counseling resources may do little to help retain a socially anxious student who just cannot see a path to surviving the small-group seminars and tutorials of upper-year courses. Complicating the situation is the fact that most post-secondary programming is voluntary or designed on a first-come first-helped basis. Thus, students most likely to benefit from specific programs and resources are often the least likely to seek them out and take part (Ciarrochi, Deane, Coralie, & Rickwood, 2002).

The Trent mentoring program worked, we suspect, because it identified problems earlier and operated by stealth – a key quality in successful programs designed to promote student achievement (Yeager, Walton, & Cohen, 2013). All that the students knew about the program was just that they had a mentor who was going to check in with them from time to time. We suspect that if students had been told that they were in a program for people with “poor EI,” the stigmatizing perceptions alone would have offset the potential benefits (Walton, 2014). The program worked because the mentors knew from the first day of classes that these new students were at elevated risk for experiencing a broad range of academic and nonacademic problems (they all had low scores across a range of trait EI domains). By checking in regularly, mentors were able to intervene early, before minor problems could snowball into major crises – another critical feature of successful programs designed to promote student success (Garcia & Cohen, 2012). One of the things we learned from the project is that students often make major life decisions, such as dropping out of university, for relatively mundane and minor reasons, such as things “not working out” (Martin, 2015). Sometimes the “intervention” from mentors involved specific referrals to university programs and resources, but more times than not, it was just an emphatic conversation designed to provide helpful tips about daily matters or induce some positive mood – critical features of intrusive advising (Abelman & Molina, 2002). The fact that the dropout rate of at-risk students in the mentoring program was only 33% at the start of fourth year, compared to almost half of the at-risk control group, suggests that our program of regular contact and gentle nudges had a positive long-term impact. The key to its success was the utilization of a trait EI measure – backed by the research on its predictive utility – to identify the best candidates for such a program.

Future Directions

This chapter described the growing body of literature on the importance of EI in post-secondary education. In a review of the empirical literature on EI and education written almost a decade ago, Parker et al. (2009) noted that “despite the recent influx of empirical papers, much work remains to be done. Some of the recent evidence is conflicting and leaves many unanswered questions and avenues to be

explored. A discrepancy in the findings that tends to stand out is the difference in results based on whether an ability-based measure of EI ... or a trait-based measure of EI is used” (p. 251). What was true of the general education field a decade ago is still very much true now of EI and post-secondary education. When evaluating work on specific topics relevant to the post-secondary area, one needs to be very careful in taking into account the trait-ability EI distinction.

Future research investigating the link between EI and academic success also needs to be more methodologically rigorous than past practice. Research on the topic is seriously confounded when the samples combine full-time and part-time students, older adolescents with mature adults, and first year students with students about to graduate. More longitudinal work also needs to be done examining the link between EI and multiple years of study, not just a single term or academic success within specific courses (for review of research on trait EI in different majors and programs of study, see Chap. 3 by Petrides et al., this volume).

A sizeable body of work reviewed in this chapter is connected to teaching or developing EI-related skills in students and other groups on campus. It is worth noting that systematic empirical information supporting these types of programs is still very sparse (Zeidner et al., 2008), although there appears to be growing interest in initiatives to teach EI on campus (Schutte et al., 2013). Given the potential importance of these types of initiatives, it is essential that program developers follow best practice recommendations for documenting the efficacy of their programs. Zeidner et al. (2002), for example, provide a set of detailed guidelines for developing and documenting EI programming.

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