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Social and emotional learning and studies on fostering synergistic development
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Social and emotional learning and studies on fostering synergistic development: Editorial comment

Social and emotional learning (SEL) is currently a measure of states’ accountability included in the Every Student Succeeds Act, under indicators of “school quality and student success”, allowing the states to expand the understanding of student success to also include social and emotional development (Melnick et al., 2017, p. V). SEL competencies refer to: self-awareness, self-management, social awareness, relationship skills and responsible decision making (CASEL, 2019).

This Supplemental Special Issue of the *Journal of Research in Innovative Teaching and Learning (JRIT&L)* continues the goal of the previous special edition on SEL, namely, to illustrate the tableau of SEL applications in communities, districts, schools, classrooms and homes. The content of this issue focuses on SEL’s contribution to a synergistic development from early childhood to adulthood. Synergistic development refers to the evolution of abilities and skills, which, when working together, can achieve more than the sum of their separate outputs.

According to Kurt Lewin, the human behaviour is a product of person-environment interaction in the form of $B = f(P, E)$, where $B$ is Behaviour, $f$ stands for function of, $P$ is Person, and $E$ is Environment (Lewin, 1936). This formula was adopted by Urie Brofenfrenner, when he emphasised the dynamics between the individual and his surroundings, and described the human being as a system functioning within a macrosystem (1979); and, also, by Gregory Bateson, when he developed his ecological framework based on “unit of survival is organism plus environment” (Bateson, 1987, p. 491). If we view the child as a complex adaptive entity (Lansing, 2003), we can contemplate him/her as an interdependent system in which all psychological processes, viewed as subsystems, merge to contribute to the human expression.

If we consider the human being as an open nonlinear (self-organising) system (Klochko, 2008; Klochko and Galazhinsky, 2009), we would conclude that humans are highly adaptable and often predictable based on individual history and ecological circumstances. It is these environmental factors that this journal issue is focusing on: How can education providers shape the education environment that fosters SEL? These environmental factors can be pre-arranged to foster SEL competencies in the developing human beings so they can develop into a healthy, harmonious and whole person (synergistically).

SEL’s impact on a student’s academics, behaviours, attitudes and other abilities is “long-term and global” (CASEL, 2019). In addition, SEL ubiquitously promotes the general development of all students, regardless on their particular needs (Zins and Elias, 2007). To present, there are several published literature reviews and reports that attest to the positive and synergistic potential impact of SEL abilities to improve people’s lives, rendering SEL as a pivotal (key) skill that unlocks the emergence and mastery of other skills in the above-mentioned domains. For example, analysing 213 school-based SEL programs, Durlak et al. concluded that students who underwent an SEL curriculum displayed “significantly
improved social and emotional skills, attitudes, behaviour, and academic performance that reflected an 11-percentile-point gain in achievement” (2011, p. 405). In 2015, the American Enterprise Institute and the Brookings Institution put forth a report that stated that an improvement of education “in ways that will better help poor children avail themselves of opportunities for self-advancement” also includes training in “social-emotional and character development” (AEI/Brookings, 2015, p. 5). In the same year, a study using national data showed positive correlations between Kindergarten measured social-emotional skills and crucial adult outcomes across education, employment, criminal activity, substance use and overall mental health (Jones et al., 2015). Following a literature review of the benefits of implementing SEL in afterschool programs by Durlak et al., (2010), Ashley Wallace and Jennifer Palmer (2018) considered ulterior literature and found that most effective programs develop social and emotional skills intentionally and explicitly, leading to developing meaningful relationships between staff and youth, which could later evolve into career readiness skills. As a final illustration of the size of the impact SEL has on developing children, when looking at the return to investment of SEL, researchers from the Center for Benefit-Cost Studies in Education (2015) from Columbia University found that the average cost-benefit ratio is approximately 11 to 1 among the six evidence-based SEL interventions, meaning that for every $1 invested in SEL training, there is a return of $11.

Initially, the majority of research on SEL has focussed on benefits for students, but nascent research supports that SEL is also associated with teacher outcomes. For example, teachers’ SEL practices are negatively associated with their burnout and positively associated with their efficacy (Ransford et al., 2009); teachers’ SEL beliefs are positively associated with their commitment to the profession (Collie et al., 2011); their comfort in implementing SEL was associated with stress related to student behaviour, and positively associated with teaching efficacy and job satisfaction (Collie et al., 2012); their SEL skills are negatively associated with burnout and positively associated with job satisfaction (Brackett et al., 2010).

The studies featured in this issue analyse education variables from early childhood to tertiary education. The first commentary comes out of the expertise gathered at the Take5! Institute, and suggests that integration, by connecting parts to make a functional whole, is a key to build self-regulation assets to surmount adversity and trauma. The second commentary focuses on how counsellors can assist teachers understand and implement SEL in their classrooms. The next commentary signals the importance of preparing pre-service and in-service teachers with SEL tools to implement in their future classrooms. Further, the last commentary advocates for SEL training in higher education.

The first article in this special edition adopts a Vygotskyan lens to look at empathy and overall SEL development via traditional and virtual play, linking cognitive, emotional, social and speech evolution together to result in a synergistic effect that makes us uniquely human. One of the strong arguments is that SEL, as a trainable skill, has been taught to children with Autism Spectrum Disorders, impacting growth in other areas of development, but needing generalisation in real contexts. Using a pool of 80 teachers and 312 children, the second article quantitatively analyses how teachers contribute to the preschoolers’ emotional competence. The results reveal that supportive emotional environments facilitate preschoolers’ emotional knowledge and prosocial behaviour, with further interesting results for the children who experienced socio-economic risk. The third article describes the results of a pilot study of a project using a “Book-based Emotional Social Thinking” approach in Athens, Greece. These results emerged from discussions with preschoolers about their interpretation of picture book characters’ socio-emotional skills. The fourth article looks at the effects of Cognitive Remediation Therapy, targeting SEL components, in tertiary-level students with mental health issues. The fifth article looks at the impact of Study Abroad programs on college students’ SEL, and advocates for integrating SEL into global curricula.
to promote social awareness and social progress, enabling society to sustain a high quality of life that allows self-actualisation.

The JRIT&L Editorial team at National University is grateful for the grand number of manuscript submissions received on SEL-related issues, and thanks all authors for their work, wishing to have been possible to make more studies known to our audience. However the publishable space was limited. The gratifying aspect of the editing process of a journal is to be able to see the creativity of human nature in its splendour. We attempted to catch a glimpse of this creativity related to the pivotal ability of developing social and emotional skills, and we forward it to our audience for a final judgement and for a good use.

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References


Further reading


About the author

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Commentary

Take 5! for adversity and trauma: an integrative approach to social and emotional learning

Trauma in the classroom

Adverse childhood experiences (ACEs), and the life-altering effects of early trauma, are of growing concern to educators and other professionals that support children and youth. The impact of childhood adversity is well-known; the higher the ACE score, the greater the risk for physical and mental health challenges, behavior problems and learning problems (Harris, 2018).

With such conclusive evidence[1], ACEs are receiving attention from educators, health professionals and policy makers. We want to protect children and youth from adverse experiences, and when adversity does interrupt their lives, we want them to be resilient, drawing on inner self-regulation capacities that help to buffer the effects of trauma.

Social and emotional learning, self-regulation and trauma: integration is key!

Integration is an essential factor in three interconnected areas of research and practice: social and emotional learning, self-regulation and trauma (Siegel, 2012). As Neuroscientist Dan Siegel explains, integration means “linking differentiated parts into a functional whole[2].” Integration, he says, is the “underlying mechanism of self-regulation.” Correspondingly, it is the mechanism that underpins learning and health – in people, and in systems (Siegel, 2011). For Siegel, self-regulation is synonymous with self-integration.

When designing and evaluating approaches to social and emotional learning, then, integration is a key principle; it is what promotes healthy change (Shapiro, 2013). This becomes even more important when a student’s experience includes trauma. So, future inquiry will need to address the factor of integration in at least three ways:

1. Integrated self: self-regulation capacity-building that focuses on the “whole person” – integrating neurophysiological, emotional, cognitive and relational experience and skills. Relationship factors include interpersonal experiences, as well as the social and cultural contexts that inform and influence individual experience.

2. Integrative inquiry: a consilient approach to knowledge generation, integrating theory, research and promising practices in diverse disciplines; for example, neuroscience, education, psychology, health promotion, and human development.

3. Integrative practice:
   - a comprehensive and inclusive approach that blends current program offerings and best practices with insights and innovations emerging from ongoing interdisciplinary inquiry; and
   - a long-term school-wide commitment to building self-regulation capacities that proactively promote mental wellness, and also help to offset the effects of trauma.
Take 5! Self-Reg Asset-Building: an integrative approach to social and emotional learning

Take 5! Self-Reg Asset-Building is an innovative and integrative approach to social and emotional learning, offering educators a positive and proactive way to respond to the ACEs epidemic and other sources of trauma. Supporting children to grow their capacity for self-regulation, we help them address the sensory, behavioral, emotional, mental and relationship challenges that typically develop when trauma is part of their experience.

Take 5! integrates tried-and-true SEL approaches with additional evidence-based tools known to promote health, mental well-being and resilience. For example, Interpersonal Neurobiology weaves findings in neuroscience with studies in independent disciplines, including psychology and mental health. The salutogenic – or “health-generating” – orientation of Take 5! comes from the field of health promotion (Antonovsky, 1996), offering a perspectival shift from deficits to strengths and capacities. Dialectical behavior therapy offers evidence-based tools that are both therapeutically effective and foster mental well-being and resilience[3]. This comprehensive theoretical grounding is supplemented with ongoing research in human development[4], while the meta-perspectives of integral theory facilitate integration at every scale[5].

Take 5! emphasizes five assets that strengthen self-regulation capacities in children and youth:

1. BE HERE Mindful Awareness Assets.
2. BE WITH Interpersonal Effectiveness Assets.
3. BE CALM Emotion Regulation Assets.
4. BE STRONG Resilience and Thriving Assets.
5. BE CHANGE Connectedness and Contribution Assets.

These five assets are congruent with the core competencies identified by the Collaborative for Academic, Social and Emotional Learning: self-awareness, self-management, social awareness, relationship skills and responsible decision-making. In addition, the Take 5! assets help to prevent and buffer the effects of adversity and trauma. Resilience is strengthened when a high ACEs score is offset by a stabilizing measure of Self-Reg ASSETS.

Although Take 5! is firmly grounded in theory, research and practice innovations, these insights are synthesized into a unified “hands-on” approach that’s easily understood and put into practice by children, youth, and the adults that support them. It’s an inclusive approach to self-regulation and social and emotional learning that can enrich the toolkit of educators and other professionals that support children and youth … even when life brings experiences of adversity and trauma.

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Notes
1. See, for example, the 2018 report “A hidden crisis: Findings on adverse childhood experiences in California.” Center for Youth Wellness, San Francisco, CA.
4. Bringing a developmental lens to self-regulation and social and emotional learning, Take 5! draws on the works of Jean Piaget, Lev Vygotsky, Robert Kegan, Jane Loevinger, Susanne Cook-Greuter, Terri O’Fallon and others.
5. See, for example, Wilber (2007).
References

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Commentary

How school counselors can help teachers integrate the basic competencies of social and emotional learning

The purpose of this commentary is to examine how school counselors can assist classroom teachers with the basic competencies of social and emotional learning (SEL), in order to enhance student learning. A brief review of the literature over the past decade reveals that there has been an increase in the number of teachers and schools in general who are utilizing SEL. However, before examining why that has been the case, it is important to discuss what exactly are SEL and the competencies that define it. There are many similar type definitions for explaining SEL but most educators agree that it is basically the process through which students acquire and effectively apply the knowledge, attitudes and skills necessary to understand and manage emotions. Furthermore, it helps students set and achieve goals, feel and show empathy for others, establish and maintain positive relationships and finally to make responsible decisions according to http://casel.org/what-is-sel/ (2019). The core competencies for SEL are: self-awareness; self-management; social awareness; relationship skills; and responsible decision making.

Once there is a basic understanding of SEL, one can see why many educators have decided to implement it at their school sites and how that has increased over the past few years. However, the question of who is involved in implementing SEL and how that is done needs to be more fully explored. Is it simply up to the classroom teacher to implement it or should there be a more collaborative approach? As a former school counselor, I believe it is important for counselors to work closely with teachers on implementing SEL, but this can often be a tricky proposition. Teachers often feel programs like SEL are mandated by site leaders or district administrators and they as teachers have no say so in whether to implement the programs or not. By using a more collaborative approach that involves administrators, school counselors and classroom teachers can help everyone have more buy-in into new programs. SEL is no different and should involve all the key stakeholders of a school site, including the school counselors, as by collaborating with teachers provides a learning climate for all students. Many experts (Hensley and Burmeister, 2008) agree that there are multiple approaches to helping students develop SEL competencies but the three most common are: utilizing an evidenced-based SEL curriculum; integrating actual SEL instruction directly into the academic curriculum; and the school or district creating actual SEL-centered policies. This requires educators at a school site to be willing to be change agents, in order to implement programs such as SEL effectively.

Fullan (2001) believed that an effective change agent possesses skills in three main capacities: developing relationships of trust; communicating the change vision effectively; and empowering others to take action toward change. School counselors working directly with teachers to integrate SEL can be visionaries by collaborating with each other. Change agents have not succeeded by working alone but rather building a culture of shared leadership with distributed ownership and common communities of practice (Trybus, 2011). To implement SEL to its optimal effectiveness, this building of common communities of practice is essential.
Hence, from a practical approach, how can school counselors help teachers in both implementing and promoting SEL at their school site? There are a number of ways for school counselors to be involved in this process, but helping with the five competencies of SEL is probably the most effective, since these are inherently part of a counselor’s expertise. School counselors typically work with students in the five competency areas, so helping teachers implement these in the classroom, as part of SEL curriculum, is a natural fit. With many of today’s youth facing complex demands, academically, personally and socially, it has never been more important for schools to implement a SEL curriculum. Involving school counselors in this process will help teachers better understand the essential components of SEL and how they can better provide skills to students for addressing the many issues they face in the twenty-first century.

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References


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The need for high-quality pre-service and inservice teacher training in social and emotional learning

Successful implementation of social and emotional learning (SEL) programs leads to positive student outcomes such as increased social and emotional skills, decreased problem behaviors, improved attitudes toward school, and increased academic performance (Durlak et al., 2011). Whereas a national survey shows that teachers believe SEL is effective and can be taught (Bridgeland et al., 2013), many teachers also report limited training and confidence in their abilities to support SEL in their students, as well as a lack of school- and district-level support (Bridgeland et al., 2013; Zinmser et al., 2016). One potential source of these insecurities is the fact that SEL training for teachers is often lacking in dosage, quality, and emphasis for pre-service and inservice teachers (Jennings and Frank, 2015; Schonert-Reichl et al., 2015). We argue that providing high-quality SEL instruction to students is extremely difficult without first teaching the teachers how to provide this instruction effectively; therefore, work in the field should be geared toward increasing and improving SEL teacher training for pre-service and inservice teachers.

Teacher social and emotional competence is a key factor to address in both pre-service and inservice teacher education in order to prepare teachers to effectively provide SEL content to students. However, not a single state includes teacher education standards that address a comprehensive set of SEL competencies for teachers and only 33 percent of state standards address a comprehensive set of SEL competencies for students (Schonert-Reichl et al., 2015). Development of teachers’ own social and emotional skills is critical because these skills equip teachers to handle student behavioral needs, develop relationships with students, effectively manage classrooms, and model these skills; these skills are also associated with reduced teacher burnout and turnover (Jennings and Greenberg, 2009). It would be beneficial for educators, current and aspiring, to regularly self-assess and develop their own social and emotional skills (Yoder, 2014). Additionally, assessments of teacher social and emotional competency could be incorporated in teacher training programs and professional development (PD) to help assess and monitor growth in these areas.

Educators also would benefit from greater knowledge about student social and emotional development, facilitating supportive classroom environments, and designing instruction that infuses SEL. The teacher knowledge of student social and emotional development is essential in forming positive classroom environments, developing positive student–teacher relationships, and fostering pro-social student development (Jennings and Greenberg, 2009). Increased educator knowledge of child development has also been cited as a necessity in prioritizing SEL initiatives (NCSEAD, 2019).

As noted above, PD opportunities tend to be inadequate in preparing teachers to incorporate SEL into their classrooms. SEL PD is often delivered as a “one-shot” workshop approach, which lacks continuous support for implementation (Jennings and Frank, 2015).
Consistent support, goal setting, progress monitoring, and frequent collaborative sessions during which participants can actively practice approaches must be included in order for PD to successfully support implementation. Metro Nashville Public Schools serves as an example in prioritizing SEL improvement in that the district has designed and implemented comprehensive evaluation rubrics for SEL initiatives. These rubrics cover school-wide environment, which includes a display of vision and mission, adult attitudes and general atmosphere, classroom environment, which includes classroom rules, student behavior and student voice, and instruction, which includes lesson plans, teacher feedback, and student reflection (Metro Nashville Public Schools, 2017). These rubrics, or ones like them, could be used for informing PD targets and progress in these areas. PD opportunities can also be improved through solutions such as university–district partnerships, online training, development of internal capacity among senior teachers and counselors to provide peer coaching, and through the use of professional learning communities organized for SEL lesson study and data analysis. While obstacles including monetary and time constraints certainly exist, schools can leverage these practices to provide PD opportunities that are embedded within schools’ larger operating systems, build teachers’ own social and emotional skills, and transmit relevant developmental knowledge and strategies for implementation to teachers.

Incorporating SEL into pre-service teacher education programs, as well as ongoing reform and development of PD opportunities with inservice teachers, clearly communicates the value of SEL, and reinforces the notion that SEL training is pivotal for all teachers, not simply an “add on.” The time has come for educational leaders at every level to work toward high-quality training opportunities for teachers, and to advocate for SEL pre-service and PD efforts to be treated with the same importance as mathematics or science training.

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Social-emotional learning: a model for higher education

Currently in the US pre-K-12 education, there is an escalating focus on social and emotional learning (SEL). In fact, every state has established formal preschool SEL standards and expected outcomes for all students. In addition, the number of states that have SEL standards through grade 12 has increased from 1 in 2011 to an expected 16 by the end of 2019 (Dusenbury, 2018). By contrast, SEL frameworks are not broadly or systematically implemented in higher education. When present in higher education, SEL is generally provided as an intervention for targeted students, as opposed to a universal program for all students (Conley, 2015). This commentary will review the importance of the development of social and emotional competence, propose a multi-tiered system of support to develop social and emotional skills in higher education students and consider implications for related research.

The benefits of competence in social-emotional skills include improved academic achievement, better job performance and results, and enhanced physical and mental health (The Organisation for Economic Co-operation and Development (OECD), n.d.). A deeper examination of the five dimensions of social and emotional skills reveals the relationship of these dimensions to a number of life outcomes. The first dimension, conscientiousness, is positively correlated with high school and college grades, as well as job performance. In addition, conscientiousness is negatively correlated with harmful behaviors, such as smoking, drug use, risky sex, unhealthy eating and others. The second dimension, openness to experience, also relates positively to high school and college grades. The remaining three dimensions, extraversion, agreeableness and emotional stability, exhibit positive correlations with task performance and organizational citizenship (OECD, n.d.).

Demonstrating proficiency in social and emotional skills increases the likelihood that students will do well academically, make healthier lifestyle choices, perform tasks well and willingly contribute to the good of organizations of which they are part. Knowing this, it seems reasonable to propose that higher education institutions create opportunities to explicitly teach social and emotional skills, especially for first-year and undergraduate students.

Supporting first-year college students during the transition to their new lives is a common practice in the US higher education (Cole, 2017). A variety of approaches and strategies are used to help new students adapt. Among these are the programs that address mental health, financial concerns, homesickness, adjustment to the academic demands of college, changes in career goals, campus culture and climate and more (Cole, 2017). These approaches, however, are focused on symptoms, rather than root causes. The approach proposed in this commentary is the implementation of a multi-tiered system of support. In this model, social and emotional skills are explicitly taught to all students and additional tiers, or layers, of support are provided for students who are experiencing higher degrees of stress, anxiety or related symptoms. Competence in these skills may help students develop and utilize effective strategies for overcoming the broad array of challenges they face as they transition to college.

The first layer, or tier one, is a universal curriculum in which students learn and practice social and emotional skills related to resilience, stress management, emotional regulation,
interpersonal effectiveness, and mindfulness (Mazza et al., 2016). These skills are taught to all first-year students, are immediately helpful, and continue to be useful throughout a student’s educations and beyond. The second tier is targeted for students who encounter elevated challenges and is provided through the university counseling center. Counseling center staff members know the skills and strategies that are taught in the universal curriculum and can reteach and review the concepts and skills as an intervention. Targeted students benefit from additional instruction, practice and feedback relative to the core SEL curriculum. The final tier is one-on-one or small group counseling for students who are experiencing significant social or emotional issues during the transition to college. This intervention is conducted by trained and qualified counselors or therapists who have expert knowledge in SEL development. Though more intense, this intervention builds on the social and emotional skills students learned in the universal curriculum and practiced in the second-tier intervention.

Ultimately, this model offers opportunities for timely and relevant research. Despite a broad focus on the first-year transition in US colleges and universities, anxiety, stress, and retention continue to be areas of concern (Cole, 2017). Some institutions provide targeted support for students who face challenges (Conley, 2015). Few, if any, offer the multi-tiered approach proposed here. Institutions that apply and evaluate this model have an opportunity to lead the field in researching the outcomes of a multi-tiered system of support for social and emotional learning.

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Social and Emotional Learning in the age of virtual play: technology, empathy, and learning

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Abstract

Purpose – Empathy is part of what makes us human and humane, and it has become a core component of the Social Awareness competency of Social and Emotional Learning (SEL) (CASEL, 2019). SEL fosters the understanding of others’ emotions, is the basis of Theory of Mind skills and frames the development of empathy. The purpose of this paper is to trace the links between empathy development and social and emotional learning when using real versus virtual environments. Empathy is a uniquely human emotion facilitated by abstract thinking and language. Virtual play is a teaching tool for acquiring prosocial behaviors. And finally, human-mediated (traditional and virtual) play is most favorable for SEL growth. Recognition of emotions such as empathy and other socio-communication skills have been taught to children with Autism Spectrum Disorders (ASD). Therefore, technology can be a venue for acquiring empathy.

Design/methodology/approach – This paper uses a qualitative interpretive methodology to advocate for the use of technology with human mediation to teach Social and Emotional Learning skills, based on the premise that cognitive and social-emotional development occurs synergistically and mediated by speech and interaction with the environment.

Findings – Technology is best seen as an instrument of assessing and teaching socio-emotional skills, but not as the only means to an end, because what makes us human can only be taught within an ecology of human interaction in real-life situations.

Originality/value – This paper reviews previous research works (both empirical and theoretical) that bring to light the connection between socio-emotional development, specifically empathy development, and virtual environments.

Keywords Social and Emotional Learning (SEL), Empathy, Play, Autism, Virtual reality

Paper type Conceptual paper

Starting from the Vygotskian premise that “learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with peers” (Vygotsky, 1978, p. 90), and keeping in mind that virtual reality (VR) did not exist at the turn of the twentieth century when Lev Semoiovich Vygotsky lived (1896–1934), this paper investigates what types of interactions are more conducive to true socio-emotional learning (“with people in his environment”/in person, vs online) and to what degree each should be used advantageously.

Technology is pervasive today in youths’ lives during their most important years of maturing of their prefrontal cortex, a brain region responsible for moral judgment, moral decision-making, information integration, causal reasoning, empathy and complex executive functions (e.g. Dvash and Shamay-Tsoory, 2014; Lamm et al., 2011; Patil et al., 2017). In the most recent US Census (2015), over 94 percent of American households with at least one child (under 18 years old) and
almost 95 percent of households with a 15–34 year old had access to a computer (United States Census Bureau, 2017). Some 58 percent of teens (13–17 years old) own or have access to a tablet computer, and 81 percent of teens (of which 91 percent boys and 70 percent of girls) own or have access to a game console (such as Playstation, Xbox or Wii) (Pew Research Center, 2015). Today, 70 percent of Americans use social media to connect, keep informed, share about themselves and entertain themselves (including playing games) (Lenhart et al., 2010; Pew Research Center, 2019).

In the following pages, this paper uses interpretive methodology to discuss the emergence of Social and Emotional Learning (SEL) during play and virtual play, and the impact of gaming on these psychological processes in typical and atypical development (specifically, autism spectrum disorders-ASD). Empathy, included as a component of social awareness in the framework for SEL, is the ability to connect with others on an emotional level, and is recognized as an essential component of being “human.” In the last sections, this paper advocates for human mediation, when using technology for an optimal expansion of SEL.

Play in traditional settings
The main source of interaction with the environment for a child is during play. Play can happen anytime and everywhere. Cooperative peer play compels children to take the other’s perspective, being a potential catalyst for empathy development (Brownell et al., 2002). Rough and tumble (R&T) play, object play, and social and pretend play are several of the categories used to describe traditional formats of children’s play activities, each with its own features and aims. In R&T play, children often mimic the competitiveness of adult sports or tournaments as they use the playground as an arena for play fighting and other social dominance maneuvers (e.g. King of the Hill). Within this context, close observation can help differentiate the posturing of real aggression from the more exaggerated movements of play fighting (Fry, 2005). Thus, on preschool and elementary playgrounds, children can learn and polish the stances, gestures and other social mannerisms that will serve them well as leaders on the athletic fields in adolescence and, even, in the boardrooms of adulthood.

Likewise, Smith (2005) notes that children’s playful negotiations, whether in fantasy play or pretend war, extend children’s perspective-taking skills, an important component of empathy and prosocial behavior. Moreover, imaginary play facilitates a Theory-of-Mind (TOM) framework (i.e. perspective-taking skills, localized in the prefrontal cortex, as noted in, for example, Happe et al., 1996). During imaginative play, children must learn to anticipate and relate to others’ beliefs and intentions to build successful dialogues while role playing. Drawing on social learning theory, authors Bretherton (1989) and Maccoby and Jacklin (1974) highlight the impact of adult models on children’s role-taking in play, particularly in selecting play objects associated with same-gender models (e.g. trucks for boys vs dolls for girls).

Object play is a distinct – and complex – category of play considered to encompass not just play centered on objects but also constructive play and tool play which serve slightly different purposes (Pellegrini and Gustafson, 2005). Whereas the basis of object play is to explore potential answers to the question: What can I do with this object?, constructive play focuses on achieving a particular goal in building or creation and tool play focuses on using the object in a constructive manner. In the sense that play is typically considered a voluntary activity of free exploration without a particular objective, constructive play and tool play seem to rest on the borderline between actual play and learning/work. Moreover, despite general linkages between object play and developmental stages, constructive play does not reflect the inverted-U developmental curve that characterizes other forms of play (meaning that the peak is in early childhood with minimal involvement in infancy or later childhood/adolescence).

Play in virtual settings
Although virtual worlds are a relatively new phenomenon, their roles in facilitating learning through play, imagination and representative experiences are essentially a progression
upon an established theme. Children are consumed in a variety of concrete, real world “props” in their attempts to access and manipulate abstract concepts within their play. Within the context of video games and virtual worlds, however, children explore representational experiences within an established framework rather than operating solely within the context of imagination. There are rules to these virtual worlds for the children to learn and follow to maximize potential rewards. There are new environments and new experiences to seek out and explore. There are problem-solving strategies to develop and implement. Whether children are spending time seated in a cardboard box or sitting in front of a laptop computer, the processes share many similarities (Klug and Schell, 2006).

Virtual worlds’ increasing popularity among young children as young as two years old has the potential to greatly change the future nature of children’s play behaviors. Van Camp (2011) cites an NPD (National Purchase Diary Panel and NPD Research) study claiming that 91 percent of 2–17-aged children play video games in 2009, with a follow-up 2011 study asserting that gaming among 2–5 year old children has increased the most. Technology is ubiquitous for the youngest generation, and children now learn to use a mouse and interact with computer screens not too long after learning to walk. While the multimodal experiences of animated characters, audio-visual storybooks, kinesthetic response systems, customizable avatars, and rich 2-D and 3-D graphical environments engage multiple senses synergistically (Yelland, 2010), the limitation is that the nature of interaction is far different from face-to-face environments. The question at hand is whether this change will benefit or impede children’s socio-emotional development.

Yelland (2010) notes that the exploratory context of young children’s social media platforms, with their tools for creating characters, “somewhat turns Piaget’s ideas about egocentricity on their head” (p. 18). Subrahmanyam and Smahel (2011) posit that offline and online worlds are interconnected, noting that children may interact in some virtual environments with offline friends and in other virtual environments with strangers. Further, they note that digitally-mediated friendships are changing the nature of friendships, in general, and how youth interact with each other, in particular. Finally, they raise a question as to whether digital friendships offer the same level of support (as a buffer against stress and isolation) as traditional in-person friendships. This is certainly a question with implications for children’s social development as are questions of the true nature of online relationships (e.g. perspective-taking, reciprocity, gender groupings, etc.) and how to promote prosocial behaviors.

**Role of play in children’s social development**

Bateson (2005) conceptualizes children’s play as a serious and active endeavor which acts as “developmental scaffolding [which, when its] job is done, […] largely falls away” (p. 16) because adults often lack the time or interest for play, and no longer need to engage in play as a skill-building activity. Further, in situating play within an evolutionary context in which play is seen as an adaptive behavior across species (Staddon, 1983), Bateson generally regards play as a means of building and refining skills in the physical, social, and cognitive (especially problem-solving) domains with the added benefit of offering a “relatively safe context” to experiment with “potentially dangerous situations” and “learn from […] mistakes, but safely” (p. 17). As situations (either biological, social or otherwise) change, Bateson contends that various species modify their play behaviors appropriately in new situations, forging new paths of development based on responses to situations. Although Bateson refers primarily to animal species in terms of how operators transform their environments, the current trend toward virtual play spaces is one example of how humans have translated and modified play behaviors to fit the ubiquity of technology in children’s lives. Since this is a newly developing arena, the repercussions of virtual playgrounds for young children are, as of yet, largely untested and speculative with long-term developmental effects yet to be determined.
Traditional views of play shed light on the functions and processes of play, even within a virtual environment. Vygotsky (1978) notes that when trying to problem-solve (a phenomenon habitually occurring during play, including virtual play), children use language to (or attempt to) solve the task and to enlist the help of an available person for assistance. Further, Vygotsky states that play marks the separation between “meaning and what is seen” (p. 97), driving children to separate thought from action. For Vygotsky, imagination, fantasy and symbolic play liberate a child from the constraints of objects, experience and the immediate perceptual field, creating a “zone of proximal development” in which a “child always behaves beyond his average age, above his daily behavior […] as though he were a head taller than himself” (p. 102). In the context of video games, virtual worlds and “virtual play,” Vygotsky would likely argue that the child is exploring complex roles, rules, concepts regarding identity, problem solving and social interaction.

Typically, children in the preschool years begin to make this transition, entering into activities that encourage them to use objects in novel, unintended ways (e.g. pretending that a blanket over two chairs is a house, or using a paper towel holder as a microphone). Meaning is preeminent (and trumps action) in the context of preschool play, propelling children toward optimal arousal in the zone of proximal development. This developmental progression is scaffolded as needed by adults who may offer direction, support, and resources. However, since one of the fundamental purposes of play is to allow children the space to test out their abilities for self-regulation and self-control, it is important that play be performed in environments that, though monitored (for safety, etc.) are not prescribed, nor pre-scripted. Partially, the purpose of children’s play worlds is to develop their own elaborate scripts for interaction, social, cognitive and physical skill building, and to practice operating within the flexible rules of this self-created world. Accordingly, the features of virtual play environments for their youngest users need to be paradoxically structured (to provide an appropriate framework, e.g. limited options for avatars and conversational exchanges so as not to overwhelm young children’s limited skills) and tractable (to grow with children as they gain new skills and seek to explore the environment in new ways).

Then, as children’s skills develop and they move more towards abstract thought, the challenge shifts to sustaining the flexibility that is found in preschoolers’ play amidst the athletic and competitive activities of middle childhood that are, necessarily, characterized by rules. In particular, scaffolding of prosocial behavior is a distinct need as bullying (and cyberbullying) incidents peak in middle childhood and early adolescence. While virtual worlds like Club Penguin Online filter conversations and block standard insults, creative users can find ways around these limitations. Ostracism and isolation are still possibilities, even within carefully monitored virtual worlds, and initial research by Williams and Nida (2009) as well as others suggests that ostracism, in general, is linked to a variety of psychopathologies (e.g. aggressive conduct, anxiety, depression).

Mussen and Eisenberg (2001) point to the importance of both parental guidance in the form of inductions and exemplary models as key elements in shaping children’s development of prosocial behaviors. While many virtual worlds for children require direct parental approval (i.e. parents must set up accounts for children under 13), children with strong literacy abilities can circumvent some of these safeguards by lying about their age. Additionally, even with parental approval of the child’s account, rarely is there direct parental supervision throughout the children’s online interactions. While adult monitors on a traditional playground will miss many of the subcurrents of aggressive dynamics, in a virtual space, where there is only an invisible filter as an omnipresent monitor, children quickly learn (and teach each other) ways of tricking the interface, potentially feeling even more bold given the seeming lack of adult presence.

The play landscape has been shifting steadily to include more virtual play opportunities, even for young children. As urban environments (in particular) struggle to provide safe and
attractive play spaces and schools cut recess time and limit free play due to budgetary constraints and accountability measures (Bergen and Fromberg, 2005), children are spending more time not just in video game play (including active play with PS4 and Nintendo 360 systems) but also in one of more than 100 (Bers et al., 2010) virtual worlds or social networking platforms targeted toward children, from the classic well-known Webkinz World, Club Penguin Online and ScratchJr to temporary virtual playgrounds like Tufts University’s grant-funded ClubZora to the newer Minecraft and its many mods (and a range of options in between).

These virtual environments vary drastically in their frameworks and features. ScratchJr, based on constructivist learning principles (Bers et al., 2010), offers a completely blank slate for the young user to construct their own objects for identity exploration, emphasizing meaning over esthetics. Webkinz World, at the other end of the continuum, represents a commercialized approach to play that promotes proprietary currency and appealing, though prescriptive, options for designing the pet’s environment and interacting with the virtual pet (Siibak and Ugur, 2010). A significant challenge of virtual environments is how, or even if, they replicate and extend these traditional types of play (i.e. R&T, pretend and fantasy, object play) or if they create an entirely new format. While elements of each can be seen in, respectively, motion-sensitive gaming consoles (with play distributed over an internet connection), creation of characters and settings (e.g. avatar development, virtual construction projects), and creation and manipulation of virtual objects (through various software interfaces that promote invention and innovation), including augmented reality toys, the sensory and perceptual exchanges – not to mention the social exchanges – are markedly different in a virtual environs than in a face-to-face setting. As these virtual environments continue to grow in popularity and as researchers conceive of ways to navigate the practical challenges of collecting data in virtual settings, there is a significant opportunity to better understand how virtual settings interact with traditional play settings to prepare children for their social, physical and cognitive roles in real life.

**Empathy development**

Internet technologies are still young. What is not clear at this juncture is whether children who are raised interacting regularly in virtual worlds will develop empathy in a different manner than other generations. Empathy is a component of self-awareness, a core competency in SEL (CASEL, 2019). Empathy development, from arousal to internalization, is a complex process that begins in early infancy. Empathy describes an individual’s “ability to understand and feel the other” (Dvash and Shamay-Tsoory, 2014, p. 282). Ayala (2010) notes that empathy plays an important role in the development of morals, which is an attribute reserved for human nature (morality is used here as a synonym for ethics). Morality, Ayala defines it, represents “actions of a person who takes into account in a sympathetic way the impact the actions have on others” (p. 9015), and is guided by moral codes, which are the result of cultural evolution, again, specific to human nature.

As children grow, observe the world, and learn from interactions with others, caregivers play a critical role in helping children make the leap from noticing others’ distress to internalizing a sense of morality that prompts them to feel guilt when they have wronged others. Empathy development places significant cognitive demands, though, so children do not fully develop their perspective-taking abilities until they have the ability to think abstractly (around age 12). In fact, empathy expands on the TOM abilities (understanding other’s mental states, or “mentalizing”; Frith, 1999), encompassing the emotional aspect of others’ experiences (Dvash and Shamay-Tsoory, 2014). Dvash and Shamay-Tsoory (2014) conclude that “empathy is the link between knowing the thoughts and feelings of others, experiencing them, and responding to others in caring, supportive ways” (p. 282).

In deconstructing cognitive and noncognitive involvement in TOM skills, Tager-Flusberg postulates that TOM abilities “encompass emotional and perceptual processing that serve as the
foundation for social recognition” (p. 313). More specifically, TOM pertains to understanding self and others’ mental states and is at the root of empathy (Dvash and Shamay-Tsoory, 2014). Consequently, abstract thinking opens the doors to true empathy (via perspective-taking) as well as the opportunity to utilize empathy in abstract realms such as hypothetical scenarios and virtual domains (such as gaming).

Following a parallel vein, Vygotsky (1978) links cognitive development to becoming human via speech: “the most significant moment in the course of intellectual development, which gives birth to the purely human forms of practical and abstract intelligence, occurs when speech and practical activity, two previously completely independent lines of development, converge” (p. 24). Vygotsky explains that, at first, children’s egocentric (toward the self) speech follows the action. Then, speech accompanies the action, describing it, and, finally, speech precedes the action, helping to plan it. Planning and self-regulation abilities are tightly related to the development of executive functions (Elliott, 2003) seated in the prefrontal cortex. Further, Vygotsky (1978) posits that, by using language as a problem-solving tool, children learn to master not only their environment, but also their own behavior. The amount of speech used increases as the difficulty of the task at hand increases. Therefore, “the history of the process of internalization of social speech is also the history of the socialization of children’s practical intellect” (p. 27). Interestingly, Shin (2018) reached Vygotsky’s conclusion via a quasi-experimental design, where the researcher tested the impact of immersive storytelling via VR. The findings “suggest that the cognitive processes by which users experience quality, presence, and flow determine how they will empathize with and embody VR stories,” in other words, “rather than simply being influenced by technological features, users have intentional and purposeful control over VR stories” (p. 64). Therefore, social-emotional development cannot occur without the development of cognitive skills. This paper next investigates how technology was used in children with ASD to teach SEL skills, and discusses the impact of virtual networking (via social networks or gaming) and culture on SEL development.

**Virtual play and empathy in atypical development**

In typical empathy development, infants progress from a combined sense of the self and other, with the ability to react to the others’ distress, all the way through cognitive and emotional development of an adolescent/adult perspective of the individuated self and other with concern and consideration for the other. In children diagnosed with ASD, significant deficits in social reciprocity and communication skills occur. Because this diagnosis represents an example of an atypical SEL style, we will discuss representative results of the most recent research on technology used to teach social-emotional skills to people with ASD. Tager-Flusberg (2007) notes that:

> […] studies of children with autism suggest that such children treat theory-of-mind tasks as logical-reasoning problems, relying primarily on language and other nonsocial cognitive processes in lieu of social insight.

Children with autism generally have executive-function deficits that require planning, flexibility, or working memory combined with inhibitory control. […] Language ability has been closely linked to the development of theory-of-mind skills. (p. 312)

For example, in refining the study of TOM differences between neurotypical and participants with ASD, Moran *et al.* (2011) found significant results regarding TOM moral judgments. While the neurotypical group evaluated accidental harms less morally wrong than attempted harms, the ASD group did not differentiate between accidental and intended harms, suggesting impairments in integrating information about the other’s mental state (in this case, premeditation to harm vs accidental harm), resulting in impaired moral judgment.
Previous research results show that children with ASD are more responsive to technology than to usual human interaction (e.g., Good et al., 2016; Parsons and Mitchell, 2002; Scassellati et al., 2012). People with ASD are more attuned to the mechanics of mouth movement rather than mouth-eyes feedback processing, according to two literature reviews (Falck-Ytter and von Hofsten, 2011; Guillon et al., 2014), where results confirm this theory for teenagers and adults but are mixed for younger children; and according to a more recent piece of research that shows that children with autism focus on mouth movements during emotional conversations (Hutchins and Brien, 2016). These findings suggest that people with autism may be less concerned with the larger perspective of how things work together and their combined effects when assembling social-communication messages. As such, the body of research on the effects of technology on the learning of children with autism has grown exponentially in the past couple of decades. The following selected examples from the literature show that researchers are testing improved ways to teach social skills to children with autism.

Boyd et al. (2015) evaluated the effect of collaborative iPad games (specifically, Zody and Lego play sets) on membership, partnership and friendship of children diagnosed with ASD. A single-subject ABAB design of four dyads revealed that cooperative virtual gaming can promote developing social skills at various levels of intimacy between players in a dyad. These results are stimulated by three main elements: “joining in” variables that support membership; “coordinating actions” assisting partnership; and “commenting on the shared experience” that enables friendship (Boyd et al., 2015, p. 16). Even if gaming on tablets does not require human mediation, the partner of the dyad is inherently human, therefore, the relationship connection occurred on a common ground.

When investigating how Minecraft impacts social skills in neurodiverse youth (including ASD), Zolyomi and Schmaltz (2017) found that virtual games provide opportunities for youth to: use it as a model for real life imaginative play; use the game avatars to connect with one another and to their therapists in real life; understand that behaving well in the virtual space will upgrade them to moderators and generalize this progression to the real environment; and express themselves further in the online medium (by making YouTube videos for other youth). The authors conclude that the virtual environment has the potential to scaffold social learning and they recommend that families and programs for neurodiverse youth embed mediated pro-social software platforms into their practices.

Bozgeyikli et al. (2018) used VR (vs verbal) instructions, and reached the conclusion that the following technology design practices work better for children with High Functioning Autism: “low visual fidelity and normal view zoom, and using no clutter and no motion in VR warehouse training applications” (p. 1). The group of researchers followed up with a systematic literature review synthesizing challenges in design and best practices in designing VR training for children with ASD (Bozgeyikli et al., 2018).

In another literature review, Jaliaawala and Khan (2019) analyze 31 studies employing computer-based (computer aided systems, computer vision assisted technologies, VR and artificial intelligence) interventions used to teach 550 children with ASD facial expressions. They reach the conclusion that research is far from developing a comprehensive technology-based intervention with a clinical impact on autism because of inconsistency in research methods used, although these interventions show much promise.

The fact that technology has been shown to be effective in teaching social skills to people with ASD, with the caveat that the generalization of trained behaviors is slow to occur, compels us to agree with Parsons and Mitchell (2002) that VR has the potential to teach social behaviors to children (with ASD) offering role-playing opportunities to practice social conventions. The role of technology is limited, though, as “technology per se cannot provide solutions to key issues in the field” (Good et al., 2016, p. 211). Nevertheless, by identifying effective aspects of “new technologies and the interactions that take place with and around
them” (Good et al., 2016, p. 211), research can advance technology as part of a treatment procedure for person-to-person interactions, but not replace the human element in the process of education.

Therefore, technology can be used as a tool for SEL growth, but with necessary human mediation, based on rigorous previous research (i.e. showing effectiveness). The quality of the interaction with technology is one of the elements that researchers can control to set the stage for the quality of Social and Emotional Learning. It is interesting to note that the best-practice technology guidelines are increasingly mimicking human interaction due to the uniqueness of human connection.

**Face-to-face vs virtual networking**

Online networking (with its main characteristic: interaction) and other mobile and internet networking applications afford both advantages and disadvantages for human connection. Use of such applications does not necessarily impede empathy since, as Hoffman (2000) notes “empathy can thus be aroused when observers imagine victims: when they read about others’ misfortunes, when they discuss or argue about economic or political issues, or even when they make Kohlbergian judgments about hypothetical moral dilemmas” (p. 91). Following this idea, users on a social networking platform such as Facebook can join each other’s social causes by linking to the cause and other supporters as well as by donating funds. Social networking followers can generate momentum for an issue or need by sharing articles and information and generating word of mouth buzz in support of an effort, much as people have raised awareness, donations and other types of assistance for people or geographical regions in distress. In this way, reading about the plight of imagined victims, even at a distance, can propel people into action, presumably by arousing empathy for the victims. By extension, when playing games, certain empathic aspects can be turned on or off, depending on the nature and purpose of the game (e.g. which team the player is on).

Computer-based methods, such as the Face Expertise Training and Let’s Face It! (LFI) software, have been shown effective in training face recognition skills in children with autism (Xu and Tanaka, 2014). Further, facial recognition platforms for mobile phones are developed to assist people with autism in understanding the emotions of the people around them (Cho et al., 2009). Physicians and psychotherapists use internet technologies to meet with clients virtually, alleviating social anxiety and providing a platform for expression of the real self as well as creating online communities of support for various issues of health and well-being. In tertiary education, online programs are becoming more popular, including for programs that are preparing social and human services professionals with a desired profile of high empathic abilities, such as teachers, therapists and nurses.

Christakis and Fowler posit that proximity and face-to-face interactions are critical to the spread of emotions (2009) and would inherently affect the ability to develop empathy since reacting to and experiencing another’s emotions are important components of empathy (Andreasonson and Dimberg, 2008). On the other hand, Hancock et al. (2008) found that emotional contagion is also possible via computer mediated communication, when the participants in their study sensed their interlocutor’s emotion and also became sad using only instant messaging communication. Logan’s (2009) study also counters that technology is not the sole barrier to empathy development, but merely “tools and circumstances to set the stage.” Logan also asserts that solegoism, a self-interest placed above else, is driven by commercialism and various factors of urban life to distance people from one another. Logan’s notion of solegoism contrasts with the formal stages of empathy development, as described by Hoffman (i.e. egocentric empathic distress to quasi-egocentric empathic distress to veridical empathic distress) that delineate an evolving focus on the other’s needs.
This dovetails with Lanier’s (2010) ideas that internet technologies are stifling the essential nature of humans to create and grow and expand capacities by relegating data to the Cloud and eliminating the need for people to interact in such simple ways as describing their marital status in their own words. In limiting humanity in such a manner, Lanier proposes that internet technologies squelch real advances and dull real human connections.

It is clear that both sides of the social networking and empathy debate have credible arguments with examples to illustrate their points. There is increasing evidence through research and anecdotal experience that today’s youth interact with technology differently than older generations, using social networking less to sustain face-to-face interactions and more to develop new interactions (Cole et al., 2017) that may even prevent face-to-face involvement (e.g. online gaming which has been shown to be addictive). In typical empathy development, infants progress from a combined sense of self and other with the ability to react to the other’s distress all the way through cognitive and emotional development to an adolescent/adult perspective of individuated self and other with concern for other. Some research points to the limits of computer simulation in stimulating mirror neurons (e.g. Dickerson et al., 2017) and promoting facial expression recognition (vis-à-vis Facial Feedback Theory), so it is possible that children of the virtual era who are adept at connecting through Webkinz interfaces and other virtual worlds may have atrophied role-taking skills.

Culture, empathy and schools
Socialization processes help shape cultural expectations for youth, including what role technology will play in their everyday lives. In fact, people have an innate need to form networks with others. Christakis and Fowler (2009) contend that networks play a heavily influential role in how people think and act since ideas and practices spread across connections by what they term the Three Degrees of Influence Rule – meaning that your friend’s friend’s friend can have a significant impact on your health or financial behaviors by virtue of how people interact and influence each other. In that case, culture plays a role in shaping empathy today since social networking plays a central role in culture, both online and in person.

In fact, there is a unique opportunity through online networks to cultivate compassion, empathy and other valued constructs by providing good role models since Hoffman (2000) marks that “children imitate a model who does what they want to do and is not punished” (p. 127). Although this refers specifically to guilt development as a prosocial construct, it is applicable in online social networking because adults can be particularly conscious (and conscientious) about employing and influencing their social networks to respond empathically to each other’s issues, to societal issues and disasters, and by taking advantage of such opportunities to help young technology users develop a moral compass.

Haim Ginott (1993), a child psychologist, shares in his book Teacher and Child a letter a school principal received from a Holocaust survivor and decided to send it to all the teachers in his school at the beginning of the school year: “My request is: Help your children become human. Your efforts must never produce learned monsters or skilled psychopaths. Reading, writing, and arithmetic are important only if they serve to make our children more human” (p. 317). Many cultures believe that it takes a village to make a child human, so joint efforts to teach and shape children’s moral perspective and empathic responses need to go beyond parents and schools. Parents can be charged with the task of supervising their children’s online behaviors, not just to prevent unwanted interactions, but also to discuss online choices, rules and values in society vs VR, and shape effective interactions. Teachers, schools and other adults in youth’s lives (from church youth directors to aunts/uncles) who are part of youth friend networks can use online tools to demonstrate care and concern, thus showcasing the principles of distributive
justice that Hoffman discusses. Although Hoffman discusses mimicry in empathy-arousal as a face-to-face process, it can also be said that online friends shape each other’s actions to a great degree whether that is through joining groups, reposting wall messages of particular note, or commenting on each other’s posts. Used intelligently, online social networking tools can be a medium of both empathic arousal and inductions, particularly when overlapping members of a single person’s network use these tools for this purpose. Armed with the information about how today’s youth approaches online technologies, older technology users can be aware of how to combat the proliferation of online victimization. Posting comments to photos, status messages or on friends’ walls rank high among preferred social networking activities – and can be an ideal opportunity for older users to intervene and teach empathy and perspective-taking skills that will hopefully carry through into instant messaging and text messaging behaviors that are also popular with youth.

VR can be mesmerizing and can capture children’s attention, time and energy. Christakis (2014) found that touch-screen technologies seem more likeable than passively watching a screen (TV) or than playing with blocks, as measured by cortisol levels in the saliva of 15–18 month olds. However, traditional toys (such as playing blocks) are the only ones that are three-dimensional, and it has been found (Christakis in a video recording as cited in Cooper, 2018) that children do not transfer the knowledge from learning to manipulate play blocks in 2D (a screen) to 3D (i.e. they would have to start learning all over again). This may also mean that being able to perform well in a virtual environment (including obtaining high scores during games or obtaining a high number of “Likes” or subscribers on social channels) does not necessarily equal a comparable success in real life, especially if the skills are not transferable. Similarly, it has been shown that actions possible in a game (real affordances) are not necessarily the same as the actions that players perceive as possible (perceived affordances) (Cardona-Rivera and Young, 2013). The discrepancy is much greater when the player moves from a virtual controlled environment, based on human-computer interaction, to a potentially unlimited realm of possibilities in reality, where other “players” (people) may make surprising decisions.

Based on these and similar findings, the American Academy of Pediatrics (2016) current guidelines for screen time use in children recommend to “avoid digital media use, except video chatting, in children younger than 18 to 24 months.” This suggestion seems to be useful for older ages as well, as a study on 143 undergraduate students from the University of Pennsylvania reported decreased loneliness and depression, after three weeks of setting a limit to social media, compared to the control group (Hunt et al., 2018). Notably, the exception above is for video chatting, which implies person-to-person interaction, reminding of Vygotsky’s postulate that speech is the link between cognitive and social development.

Social associates tend to shape our ideas and practices, so it is imperative that society uses that influence for the good. In fact, there is a unique opportunity through online networks to cultivate compassion, empathy and other valued constructs by providing good role models since Hoffman (2000) posits that “children imitate a model who does what they want to do and is not punished” (p. 127). Although this refers specifically to guilt development as a prosocial construct, it is applicable in social networking (including via gaming) because adults can be particularly conscious (and conscientious) about employing and influencing their social networks to respond empathically to each other’s issues, thereby modeling prosocial approaches to societal issues and disasters. For example, a parent who takes the time to sporadically check on their child’s play activities within Club Penguin Online can point out fellow penguins that seem isolated, or discuss visible conversations that may be hurtful to other players and, thus, use virtual circumstances to help young technology users develop a moral compass.
Supporters of SEL advocate for schools to teach children how to build relationships rather than do well on tests (Smagorinsky and Downey, 2018), reversing the Every Student Succeeds Act, formerly No Child Left Behind legacy. However, schools can and should do both. School culture can take an active role in the social emotional training process by educating parents and other adults who interact with youth as well as by providing empathy training relevant to online settings. In the nebulous world of cyberbullying, school administrators are frequently at a loss as to how to deal with behaviors that do not occur on school grounds or during school hours but have a huge negative impact on students at school; in implementing intervention and anti-bullying programs that target such issues, school representatives have the opportunity to incorporate SEL training as a means of encouraging self-regulation and caring among students. Since cyberbullying is most relevant among middle school and high school youth who are, most likely, able to reason abstractly, empathy training can help students focus on taking another’s perspective (in this case, that of the victim) to arouse empathic concern or empathic anger to intervene or report on bullies in the future.

To follow Hoffman’s theory, when students are bystanders (as most students are in cases of bullying/cyberbullying), this can be an important time to foster prosocial feelings and empathic/sympathetic distress since youth are a witness to harm others are doing or have done – a condition that Hoffman mentions is critical for empathy arousal. Educators, administrators and parents can also use examples of other teen issues, particularly those indicated on social networking sites, to arouse empathy among youth and help them internalize a sense of guilt that can even extend to “virtual transgressions” encompassing such areas as responsibility guilt and guilt over affluence that can be a spur to action. On the other hand, in instances where children have been identified as aggressors, a different method is required. That is, since Hoffman notes that “children’s harmful action usually serves an instrumental purpose such as getting something they want” (p. 135) and adult intervention is key to help youth internalize a sense of guilt over wrongdoing which happens primarily through parental inductions.

According to Hoffman (2000), prosocial models (e.g. parents, teachers, other adults) “reinforce children’s empathic dispositions – especially the sympathetic component of empathic distress – and make children more receptive to parental inductions which […] elicit empathic distress and guilt” (p. 143). Therefore, in this complex process, parents plant the seeds and schools (and society at large) nurture the process along. Hoffman notes that there are cultural differences in the development of “self” with western societies (e.g. USA) emphasizing individualism more than Eastern/Asian societies that emphasize interdependence. However, Hoffman contends that empathy is a universal human construct and that, although Eastern/Asian societies may be collectivistic, they still develop an integral sense of self that can be differentiated from others to allow for perspective-taking. In fact, Hoffman notes “it seems unlikely that culture can eliminate conflict. In any case, it seems […] there is nothing more powerful than fights, arguments, and involvement in negotiations over disputes, to sharpen one’s self-awareness – indeed, to make it virtually impossible not (Hoffman’s emphasis) to be aware of the separation of self and other” (p. 276).

Overall, educators and administrators need to have an awareness of the many cultures from which students come so as to better understand the differences among them and how best to promote prosocial interactions online (Michikyan et al., 2014). Some cultures may rely more heavily on mimicry or language-mediated empathy arousal, according to Hoffman, so schools need to be attuned to these differences and how they manifest in student actions – and particularly aware of differences that exist among major cultural representations in schools (e.g. European–Americans, African–Americans, Hispanic–Americans, and Asian–Americans) since each group brings their own cultural constructs to the scene. Above all, culture is an important context for considering empathy development since it may look different from student to student.
Vygotsky (1978) warns that if play (especially isolated play) becomes the main activity of the child, and, hence, becomes the main source of connecting to a realm, that child will have problems distinguishing illusion from the social reality:

Everything that concerns a child is play reality, while everything that concerns an adult is serious reality. A given object has one meaning in play and another outside of it. In a child’s world, the logic of wishes and of satisfying urges dominates, and not real logic. The illusory nature of play is transferred to life. This would be all true if play were in deed the predominant form of a child’s activity. But it is difficult to accept the insane picture that comes to mind if the form of activity we have been speaking of were to become the predominant form of a child’s everyday activity, even if only partially transferred to real life (p. 102).

In other words, Vygotsky’s work advocates for human-mediated play (including virtual play), so that speech and highly abstract cognitive functions (both so uniquely human) can develop via a reality check (a check against the cultural rules, values, etc. that are in place in a given society) and an adaptive transfer of what is learned during play in order for a harmonious social and emotional development to occur.

Conclusions and future directions

This paper has raised several key issues concerning children’s interactions in (and with) virtual spaces. There clearly is a need to further explore how youth spend their time in virtual spaces since various reports suggest that children as young as two years old are spending their play time online. Children can develop empathy, as an essential socio-emotional skill through virtual play and various uses of technology only if a human (teacher, parent, peer, etc.) mediates the understanding and applicability of the game process and game results. It is only through human interaction that the child learns to use speech or language (augmentative communication can play an important role here for nonverbal or verbal-limited children) as a tool to develop its other psychological processes, including abstract thinking skills, emotional regulation and prosocial behaviors. Therefore, the interaction (human-to-human, human-to-avatar, avatar-to-avatar) in the virtual world and about the virtual world is most important, not the participation in a virtual realm itself. What we see or what happens in VR cannot automatically be generalized or adapted to the social environment, unless it is mediated by society and culture (see the Cultural-Historical Activity Theory, derived from Vygotsky and Leontiev’s works, and which supports that individual consciousness is shaped by the history of each individual’s social and cultural experience, Vygotsky, 1978). In other words, only human or human-like interaction can facilitate socialization, blooming of emotional tools, and what it means to be human: “The path from object to child and from child to object passes through another person. This complex human structure is the product of a developmental process deeply rooted in the links between individual and social history” (Vygotsky, 1978, p. 30).

In terms of future research, certainly, an attempt to explicate how emerging media formats assist (or impede) children’s social development will pay attention to prosocial behaviors and whether virtual environments facilitate (or can be designed to facilitate) perspective-taking and TOM capacities in young children.

How virtual environments shape children’s patterns of affiliation is particularly important since media specialists like Kirsh (2010) suggest (via the friendship reduction hypothesis) that relationships may be weakened in virtual environments where more time is spent with strangers than with known affiliates. Conversely, Kirsh also reports that recent research supports the notion (via the friendship stimulation hypothesis) that virtual environments may actually strengthen affiliative efforts as children tend to seek out offline friends in online settings. Nevertheless, since he also reports that lonely children are not likely to be engaged or build relationships online since they spend more time chatting with strangers, the nature of social isolation needs to be further investigated in online settings.
Identity development through processes of online socialization is another area that merits further attention. Various media experts suggest that disembodied avatars tend to reflect children’s real identities, but research to date does a poor job of capturing how children think about the identities they portray online. According to Erikson’s stages of identity development, the youngest virtual players would be at the stage of initiative vs guilt wherein the objective is to gain skill in initiating activities and deriving pleasure from the unfolding of these actions. Virtual environments must be adapted to the capabilities of these youngest users, then, to promote these goals. For example, interfaces should be aural and graphical rather than text-based and, although children as young as two or three can be competent using a mouse, the motor skills required of these youngest players should be minimal.

Virtual environments are mere scaffolds that support the development of SEL and, specifically, empathy. VR also provide enriching opportunities for fantasy play and tool use, since these (as discussed by Bateson, etc.) are hallmarks of the developmental period. Thus, effective virtual environments require an even more careful balance of elements (support and scaffolding vs opportunities for independence) than traditional play settings which might be more “forgiving” of successive approximations toward a necessary skill or behavior. For example, in a virtual environment, either the player has the dexterity to successfully select a button to proceed with a task or manipulation fails and the player cannot move forward in the game. In contrast, real-life play settings permit fantasy and object play (e.g. dress up, tea parties, role-playing games) without requiring particular skill sets.

Although school age children have different identity tasks, as posed by Erikson (i.e. industry vs inferiority), there are structures inherent to virtuality that can interfere with appropriate development. Virtual environments appropriate for this age group need to balance opportunities to explore and assuage curiosities with appropriate safeguards (on privacy, access to age-appropriate materials, etc.) and scaffolding to enable these explorations. Children at the youngest range of this group, for example, may not yet have the cognitive capacities to understand cyber currencies (e.g. why their parents will not pay for memberships or value-added features of virtual settings). Similarly, since early school age children are still building skills for making friends, they may be less adept at interacting prosocially in settings where the impact of their words and actions cannot be seen. With the rise and media proliferation of online aggressive incidents, fostering positive social interactions among the youngest players in online environments is critical to developing a prosocial populace. Hopefully, future research can address skill disparities in virtual playgrounds and consider potential impacts to identity development, especially for the youngest players.

Used intelligently, online tools can be a medium of empathic development and inductions, identity exploration, and new avenues of pretense, object play and even (via gaming consoles and simulated environments) rough-and-tumble play, albeit in qualitatively different ways than traditional play settings. As technology continues to evolve, so will the elements of virtual worlds that facilitate play and development. If, as Bateson notes, play helps develop skills needed later in life, it is particularly critical that children’s virtual environments not only build children’s technological capabilities (which are increasingly necessary in a global society) but also strengthen relational skills and problem-solving capacities.

Media interactions do not necessarily prevent the development of empathy but they cannot teach it by themselves. Again, it takes a village – it is up to the surrounding community (parents, teachers and schools) to help students develop empathy that can then be applied to new media settings. Like an ax that can be used constructively or not, new technology can be a tool used for a variety of purposes. Students need to be taught empathy outside the online environment so they can integrate these skills into their use of new technology applications (which often have severe consequences for lack of empathy, as in cyberbullying), hopefully using the ease of friend networks to provide support, demonstrate empathy, and build relationships in a positive and healthy manner.
References


Further reading


About the authors

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Abstract

Purpose – Emotional competence supports preschoolers’ social relationships and school success. Parents’ emotions and reactions to preschoolers’ emotions can help them become emotionally competent, but scant research corroborates this role for preschool teachers. Expected outcomes included: teachers’ emotion socialization behaviors functioning most often like parents’ in contributing to emotional competence, with potential moderation by socioeconomic risk. This paper aims to discuss this issue.

Design/methodology/approach – Participants included 80 teachers and 312 preschoolers experiencing either little economic difficulty or socioeconomic risk. Children’s emotionally negative/dysregulated, emotionally regulated/productive and emotionally positive/prosocial behaviors were observed, and their emotion knowledge was assessed in Fall and Spring. Teachers’ emotions and supportive, nonsupportive and positively emotionally responsive reactions to children’s emotions were observed during Winter. Hierarchical linear models used teacher emotions or teacher reactions, risk and their interactions as predictors, controlling for child age, gender and premeasures.

Findings – Some results resembled those parents’: positive emotional environments supported children’s emotion knowledge; lack of nonsupportive reactions facilitated positivity/prosociality. Others were unique to preschool classroom environments (e.g. teachers’ anger contributed to children’s emotion regulation/productive involvement; nonsupportiveness predicted less emotional negativity/dysregulation). Finally, several were specific to children experiencing socioeconomic risk: supportive and nonsupportive reactions, as well as tender emotions, had unique, but culturally/contextually explainable, meanings in their classrooms.

Research limitations/implications – Applications to teacher professional development, and both limitations and suggestions for future research are considered.

Keywords Early childhood education, Cultural issues, Emotional competence, Socialization of emotion

Paper type Research paper

Emotional competencies are identified as among the most important abilities supporting early school success and the growth of academic competence during elementary school (Denham, Bassett, Thayer, Mincic, Sirotkin and Zinsser, 2012; Nix et al., 2013). Children who understand and regulate emotions and are more emotionally positive at school entry are more likely to develop positive and supportive relationships with peers and teachers, participate more and achieve at higher levels throughout their early schooling (Blankson et al., 2017; Denham, Bassett, Thayer, Mincic, Sirotkin and Zinsser, 2012; Diaz et al., 2017; Di Maggio et al., 2016; Hernández et al., 2016). 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 behavior problems and school difficulties.
Thus, emotional competence greases the cogs of a successful early school experience; its effects may be long lasting. In fact, kindergarten prosocial behavior (including understanding and regulating emotion) was associated with young adult success in domains of education, employment, mental health and avoidance of crime and substance use, independent of important child, family and contextual factors (Jones et al., 2015).

Fueled by these facts, there is increasing focus on emotional competence as crucial for preschoolers’ concurrent and later social competence, mental health and school success (Bridgeland et al., 2013). Educators and parents are becoming ever more aware of the need to address social-emotional development in early childhood educational settings and training (Buettner, Hur, Jeon and Andrews, 2016; Schonert-Reichl et al., 2017; Zinsser et al., 2014). Furthermore, more and more states in the USA have standards for social-emotional competence starting at early childhood (Dusenbury et al., 2015). National legislation also has been introduced in the USA, authorizing allocation of funds for technical assistance, training and programming in this area (O’Connor et al., 2017). To support these initiatives, more research is warranted on the promotion of emotional competence in early educational contexts.

Socialization of emotional competence
Thus, given its importance, how is such emotional competence fostered? The emotion socialization perspective states that a socializer’s emotion-related behaviors have a significant impact on such development: Their contingent reactions to specific emotions and expressed emotions help young children acquire culturally appropriate emotional competence skills (Denham, Bassett and Wyatt, 2014). Though we know much about parent socialization, there is far less clarity on how early childhood educators promote or hinder such development (Denham, Bassett and Zinsser, 2012). Accordingly, examining teachers’ contributions is sorely needed.

All people with whom children interact exhibit a variety of emotions, which children observe. Thus, modeling includes specific emotions observed by children along with the overall emotional expressiveness (and its valence) to which children are exposed. In general, positive emotion in the family is associated with children’s own positive emotions, with the converse true for negative emotion or lack of emotion (Davis et al., 2015; Denham, Bassett and Wyatt, 2014; Fields-Olivieri et al., 2017). Appropriate expressiveness also facilitates preschoolers’ emotion regulation (Eisenberg et al., 2003), but parental negativity may overarouse young children who cannot yet regulate their own emotions well, an emotionally hostile template for dysregulation (Luebbe et al., 2011; Newland and Crnic, 2011; Silk et al., 2011). Family positive expressiveness also promotes emotion knowledge, perhaps because positive feelings render children more open to learning and problem solving (Denham, 1998).

Children’s emotions often elicit, even require, contingent reactions from social partners. Adults respond to children’s experience and expression of emotions in ways that have been construed as supportive (e.g. accepting, comforting), or nonsupportive (e.g. ignoring, minimizing, punishing). These reactions convey important messages about emotions, bearing on toddlers’ and preschoolers’ emotional competence (Denham, Bassett and Wyatt, 2014; Meyer et al., 2014). Mother’s supportive reactions contribute to preschoolers’ positive expressiveness, emotion regulation and emotion knowledge (Fabes et al., 2002; Spinrad et al., 2004). In contrast, parents’ unsupportive reactions are related to children’s greater sadness and fearfulness and diminished emotion regulation (Berlin and Cassidy, 2003; Luebbe et al., 2011).

Teachers’ role
During early childhood, contexts outside the family become important. Young children learn about emotions through rich daily interactions with teachers and peers. In addition, even
when children are not directly involved in an interaction, they can learn about classroom emotional norms, and acquire emotional competence, through observing social–emotional behaviors of peers and teachers. Thus, preschool teachers are pivotal facilitators of the development of children’s emotional competence (Denham, Bassett and Zinsser, 2012).

A preponderance of study focuses on teachers’ abilities to provide an emotionally supportive environment in the classroom, without examining their discrete emotion socialization behaviors. However, given the literature on parents’ roles in socialization of emotion, as well as similar roles that parents and teachers have as socializers and increasing time preschoolers are spending in group settings, early childhood teachers’ emotions and reactions to children’s emotions are likely to send socialization messages to children, just as they do at home, with similar outcomes (Denham, Bassett and Zinsser, 2012). At the same time, contextual differences point to potentially different or unique contributions of teacher socialization of emotion – the higher adult/child ratio in the classroom, for example, may dictate teachers’ greater need to promote emotion regulation. Surprisingly, however, these assumptions rarely have been tested.

The scant research on the topic corroborates the potential importance of teacher socialization of preschoolers’ emotional competence. Regarding modeling, teachers’ negative expressiveness was negatively related to older preschoolers’ positivity (Morris et al., 2013). Concerning contingent reactions, early childhood teachers both encourage and discourage young children’s emotional expression via a variety of behaviors, such as comforting, distraction, problem solving, punishment or minimization (Ahn, 2005; Ahn and Stifter, 2006); however, they infrequently validate children’s emotions (e.g. “it is okay to feel sad”). Building on this description, Bassett et al. (2017) found that teachers’ reactions to preschoolers’ emotions contribute to children’s growing emotional competence, particularly for those with certain temperaments. Morris et al. (2013) also showed that teachers’ dismissing reactions were negatively related to older preschoolers’ positive expressivity and emotion knowledge.

These initial research efforts require extension. By examining micro-levels of teachers’ emotion socialization behaviors in the classroom in this study (i.e. emotions and reactions to children’s emotions), we further understanding of socialization of emotion in preschool classrooms. Knowing how preschool teachers’ discrete emotion socialization behaviors are related to children’s development of emotional competence could be very useful for detailed practice recommendations, and lead to suggestions for professional development.

**Socioeconomic risk**

Thus, understanding teacher socialization of emotion is an important goal. However, other contextual issues can be extremely important in the development of preschoolers’ emotional competence. For example, preschoolers living in poverty have demonstrated profiles of compromised emotional competence, including deficits in emotion knowledge, positive expressiveness and emotion regulation (Denham, Bassett, Mincic, Kalb, Way, Wyatt and Segal, 2012); these profiles predicted concurrent social competence and school adjustment, as well as later school adjustment and preacademic success (see also Denham, Bassett, Zinsser and Wyatt, 2014). Raver et al. (2015) went further, investigating effects of poverty, household chaos, and interparental aggression on aspects of young children’s emotional competence: four-year-olds living under such circumstances had difficulties with emotion regulation, mediated by deficits in identifying emotions. The authors noted that environmental adversities hamper children’s ability to detect and appraise stimuli signaling safety or threat (see also Erhart et al., 2019), and to regulate emotions elicited by such stimuli.

Socioeconomic risk also can be related to differences in socialization of emotional competence in the family; adults are not immune to the effects hypothesized by Raver et al. (2015). For example, Shaffer et al. (2012) found that mothers living in
poverty tended to show more unsupportive reactions to their children’s emotions. Similarly, Davis et al. (2015) have shown that, even controlling for maternal depression, mothers living in poverty showed less frequent positive emotion. Furthermore, given that in the USA over three times as many African–American children live in poverty compared to European–American children (Mishel et al., 2012), it is important to consider issues of ethnicity and culture as they relate to socialization of emotion and its outcomes for children living in poverty.

If it can be difficult for families living in poverty to demonstrate socialization behaviors often identified as promoting preschoolers’ emotional competence, could early experiences with teachers offset these potentially deleterious effects? After all, although important questions remain about the impact of early childhood education for low-income children, their emotional competence may be especially sensitive to environmental inputs embedded within quality programming (Duncan and Magnuson, 2013; Melhuish et al., 2015), particularly if it specifically targets this domain (Fishbein et al., 2016; Nix et al., 2013).

Nevertheless, specific teacher practices and contributions to low-income children’s development of emotional competence have not been well specified. Having a positive relationship with the teacher promotes low-income children’s emotional competence (specifically lessened negativity and lability; Shields et al., 2001). Thus, teacher socialization could be especially important for emotional competence of children living in poverty.

The current study

Building from these considerations, the overarching goal of the present study focused on the contribution of teachers’ emotion socialization behaviors to children’s emotional competence in the preschool context. We expect that positive and negative emotional expressiveness, along with supportive, unsupportive and positively emotionally responsive reactions to children’s emotions, will function in a manner often similar to parents’ in their contribution to children’s growth in emotional competence. However, given little extant research and important contextual differences in classrooms vs families (e.g. dealing with multiple rather than individual children), we cannot rule out unique teacher contributions differing from parents’ socialization of emotional competence. Furthermore, contributions of teacher socialization may be especially important to developing emotional competence for children living in poverty. Such contributions to emotional competence for children living in poverty also may be influenced racial/cultural norms and practices, because many children living in poverty are African–American or Latina/o.

Thus, our first research question is as follows:

**RQ1.** How does observed teacher socialization of emotion behavior contribute to young children’s emotional competence at the end of the preschool year, even given their emotional competence at the beginning of the preschool year?

Furthermore, our second research question is:

**RQ2.** How do contributions of teacher socialization vary by the socioeconomic risk status of the children in their classrooms?

Method

**Participants**

Participants included 80 teachers and 312 children aged two and one-half to five years (54 percent boys). Children attended private and university child care (n.centers = 22; n.teachers = 60; n.children = 228) (“low socioeconomic risk”) and government- or church-related centers serving children living in families experiencing socioeconomic risk (n.centers = 2; n.teachers = 20; n.children = 84) (“high socioeconomic risk”). In total, 61 percent of teachers had
attained a BA degree or better, 48 percent had taught for less than 10 years, and half were less than 35 years old. In terms of ethnicity and race, 59 percent of teachers were Caucasian, 19 percent African–American and 6 percent Asian, with 10 percent identifying as Latina.

Given our second problem question, we examined correlates of classroom economic risk status. Teachers of children living at socioeconomic risk tended to be: more highly educated, $\chi^2(1) = 2.61, p < 0.10$; better remunerated, $\chi^2(4) = 33.78, p < 0.001$; more likely to be African–American, not Caucasian, $\chi^2(2) = 4.86, p < 0.10$. The total group of children for whom demographic data were available was 72.6 percent Caucasian, 13.7 percent African–American, 6.4 percent Asian and 7.3 percent other, as well as 9 percent Latino/a. Children in classrooms where students were predominantly at socioeconomic risk were more likely to be African–American and less likely to be Caucasian or Asian, $\chi^2(3) = 52.85, p < 0.001$; they were also more likely to be Latino/a, $\chi^2(1) = 7.23, p < 0.01$.

Procedure
Participants were recruited near the beginning of the school year; after meeting with each center’s director, we obtained consent from participating teachers. Then, children and families in these teachers’ classrooms were recruited at recruitment events, information sessions held at the facilities, and/or through the help of facility personnel.

Child data were collected in the first half of the school year, after children had become acclimated to the classroom (T1) and near the end of the school year (T2). In each data collection period, we observed children’s behaviors during peer interactions and performed direct assessments of their emotion knowledge. Teachers’ emotions and reactions to children’s emotions were observed in the classrooms across different days in the Winter of the school year.

Measures
Observation of teachers’ and children’s emotions and reactions to each other’s emotions. Using an observational system (FOCAL-T; Denham and Bassett, 2013), we observed teachers interacting with children in their classroom during regular activities for four 10-min sessions over a period of approximately three to four weeks, predominantly during circle time, center time and lunch. FOCAL-T is designed to capture preschool teachers’ emotion socialization behaviors: expression of discrete emotions and reactions to children’s emotions. Teachers were observed in their classroom setting by coders using tablet computers and software developed by Roberts (2011). Each teacher was observed for four 5-min trials with teacher as focal person, counting her expressed emotions and children’s reactions, alternating with four 5-min trials with children as focal person(s) counting children’s emotions toward the teacher and the teacher’s reactions to their emotions. Because our focus was teachers’ overall emotion socialization behaviors in the classroom, specific teacher–child dyadic observations were not captured.

Focal emotions included happy, sad, angry, tense, tender, pain, other and neutral. Two types of reactions to focal persons were coded: behavioral and emotional reactions. Behavioral reactions included punitive reactions (e.g. threaten child for showing emotion), problem-focused reactions (e.g. help child solve an emotion eliciting problem), emotion-focused reactions (e.g. try to make child feel better), validating reactions (e.g. acknowledge child’s emotion) and minimizing reactions (e.g. tease child for expressing emotion), and emotional reactions included, distress reactions (e.g. show frustration to child emotion) and matching positive reactions (e.g. smile back to smiling child). Intensive training was required to become a reliable FOCAL-T coder. Inter-observer reliability for video adult–child interactions was kappa = 0.85 for emotions and 0.67 for reactions. Finally, reliability trials in which paired observers live-coded teachers’ and children’s emotions and reactions yielded kappas = 0.74 for emotions and 0.85 for reactions.
After data collection, we created scores to be utilized in subsequent analyses. First, proportions across all sessions of each observed teacher emotion and reaction were calculated. Teachers’ affective balance score (i.e. difference between their standard scores for proportion happiness minus proportion anger), along with proportion of total emotions shown for sad and tender emotions, were subsequently used as indicators of emotions expressed.

Reaction proportion aggregates were created based on a principal components analysis: nonsupportive behavioral reactions (punitive reactions + minimizing reactions), supportive behavioral reactions (problem-focused reactions + emotion-focused reactions + validating reactions). We also created the positive emotional responsiveness aggregative (positive emotional reactions – distressed reactions).

Criteria: observation of children’s emotional behaviors. The Minnesota Preschool Affect Checklist-Revised/Shortened (MPAC-R/S: Denham, Bassett, Thayer, Mincic, Sirotkin, and Zinsser, 2012; Denham, Bassett, Thayer, Mincic, Sirotkin, and Zinsser, 2012) is an 18-item observational measure assessing children’s social-emotional behaviors (i.e. emotional expression, emotion regulation and social skills) during interaction with peers. In using MPAC-R/S, children’s predefined behaviors are observed in differing play and interaction contexts (as opposed to teacher-led instructional time), and coded for presence (“1”) or absence (“0”) during two 5-min intervals across two different days. The items in MPAC-R/S are organized into scales for positive (three items: showing positive affect in any manner – facial, vocal, and/or behavioral) and negative affect (two items: showing negative affect in any manner), productive (two items: e.g. engaged in ongoing activity) and unproductive (two items: e.g. being listless) involvement in age-appropriate activities, positive reactions to frustration (two items: e.g. when facing with conflicts, verbally expressing frustration in a positive or neutral manner), prosocial behaviors (two items: cooperating with peers, taking turns), peer skills (two items: leading and joining) and dysregulated behaviors (three items: venting frustration at people or objects). Thus, behaviors sampled via the MPAC-R/S yield rich information about children’s emotional behaviors across four short periods. Scale scores represented item means summed across visits.

After intensive observer training, good to excellent inter-observer reliability was indicated by intra-class correlations ranging from 0.74 (negative affect scale) to 0.98 (emotion regulation scale), p’s < 0.001. Principal component analyses yielded three aggregates: emotionally negative/dysregulated (negative affect, dysregulated behaviors), emotionally positive/prosocial (positive affect, prosocial behavior, peer skills) and emotionally regulated/productive (positive reactions to frustration, productive involvement in play). Scores to be used in analyses were created by taking the mean of scales loading highly on each component.

Emotion knowledge: the Affect Knowledge Test-Shortened (AKT-S; Denham, Bassett, Brown, Way and Steed, 2015). AKT-S assessed preschoolers’ understanding of emotion using puppets with detachable faces that depict happy, sad, angry and afraid expressions. For labeling (six items), children were asked to identify sad, angry and afraid facial expressions by verbally naming them (expressive knowledge), and then by nonverbally pointing to them (receptive knowledge). For situation knowledge, nine vignettes were enacted using puppets, accompanied by vocal and visual affective cues emitted by the puppet/experimenter. For three children’s stereotypical emotion knowledge vignettes, the puppet depicted the emotion most people would feel (e.g. fear during a nightmare). In the remaining six nonstereotypical vignettes, the puppet depicted emotions different from each teacher’s reports of her child’s likely feelings. Among nonstereotypical situations, three vignettes pitted positive vs negative emotion (e.g. happy or sad to come to preschool); the rest pitted negative vs negative emotion (e.g. angry at or afraid of a peer’s aggression). Children affixed a flannel face to report the puppet’s emotion.

Children received two points for correct identification of emotion on all items, one point for identifying correct valence but not correct emotion (e.g. sad for afraid). The score used in
subsequent analyses was the mean of standard scores for all subtests’ items. Internal consistency reliability \( \alpha \) was 0.77. The AKT-S has demonstrated reliability and validity (Denham and Bassett, 2013).

**Analytic plan.** We conducted 2-Level Hierarchical Linear Modeling (HLM; Raudenbush and Bryk, 2002) analyses, partitioning variance in the outcomes into two components: child level (Level 1) and classroom level (Level 2) variance. Unconditional models for all outcomes were examined before the full multi-level models. All variables were centered prior to analyses. Intra-class correlations coefficient (ICCs) were calculated for each outcome, estimating the amount of variance at the classroom level and thus appropriateness of HLM. After examining unconditional models, full models were created for observed teacher emotions, and observed teacher reactions to children’s emotions, as predictors of T2 outcomes at Level 2 (along with classroom socioeconomic risk), controlling for age, gender and the T1 premeasure of the outcome variable at Level 1. Moderated associations were explored between teacher emotion socialization predictors and risk. Given that only two to seven participants’ data were missing depending on measure, data were handled with listwise deletion, resulting in 305–310 children with T2 scores.

**Results**

*Unconditional multi-level models*

The variance at Level 1 and ICCs for each outcome’s unconditional model are shown in Tables I through III. ICCs in unconditional models showed that class membership accounted for a significant amount of variance, though still less than the amount of variance explained at the child level, suggesting that HLM is appropriate. Classroom membership was an important factor in predicting children’s outcomes.

*Full models*

For child \( i \) in classroom \( j \), each outcome is equal to its classroom average, \( \beta_0 \), plus effects for levels of teacher predictor \( \gamma_{01} \), plus error, \( \mu_0 \). The Level-2 equation models between classroom variance using each teacher behavior predictor as a grand mean centered predictor, with classroom socioeconomic risk noncentered.

Tables I through III show results for full models. In Table I, younger children and those with higher T1 emotionally negative/dysregulated scores had higher T2 scores, as did children in high-risk classrooms. For emotionally regulated/productive scores, again children in high-risk classrooms, as well as in classes where the teachers showed lower affective balance (i.e. more anger), showed greater T2 scores. There also were interactions between classroom socioeconomic risk and teacher emotions for two of the three emotional competence behavior outcomes (Figure 1): When teachers of high-risk classroom were more tender and more affectively balanced (i.e. happier), but those serving low-risk classrooms were angrier (lower affective balance) and sadder, children showed higher T2 emotionally regulated/productive behavior. In contrast, when teachers of high-risk classrooms were more tender, children showed more emotionally negative/dysregulated behavior. Finally, only the T1 measure predicted T2 emotionally positive/prosocial scores in analyses involving teacher emotions. Random effects analyses suggested that contributions of teacher emotions differed across teachers for emotionally negative/dysregulated and emotionally positive/prosocial outcomes.

In Table II, new findings include teachers’ nonsupportive behavioral reactions (as well as the T1 measure) predicting less emotionally positive/prosocial and emotionally negative/dysregulated behavior (borderline effect) at T2. Furthermore, an interaction of supportive behavioral reactions and risk suggested that for children in high-risk classrooms, teachers’ supportive behavioral reactions were related to greater emotionally negative/dysregulated scores at T2 (Figure 2). Finally, emotion knowledge at T2 was predicted by being older, a
girl, having higher T1 scores, trends toward less teacher sadness (this effect was significant for situation knowledge, $-0.14$, $p < 0.02$) and more teacher affective balance (i.e. more happiness), as well as more nonsupportive behavioral reactions and more positive emotional responsiveness for children in high-risk classrooms (see Table III and Figure 3).
Discussion
These findings shed light on how teacher socialization of emotion predicts preschoolers’ developing emotional competence. Both child and teacher predictors (or their interactions with socioeconomic risk) reached significance for both emotional competence behaviors and emotion knowledge. Conclusions regarding teacher predictors and their interactions with risk are independent of Level-1 variables, including premeasures of children’s emotional competence.
Problem Question 1: main effect contributions of teacher socialization of emotion

The pattern of teacher predictors did show some similarities with parental socialization findings. First, as is true for families (Denham, 1998), a generally positive emotional environment supported children’s learning about emotion, and lack of nonsupportive reactions (e.g. minimizing or punishing children’s emotions) facilitated development of children’s emotional positivity and prosociality (Berlin and Cassidy, 2003; Luebbe et al., 2011). However, several findings ran counter to those generally found with parents and may be unique to the classroom context. For example, children displayed greater emotion regulation and involvement in play when teachers were less affectively balanced (i.e. angrier and sadder, particularly in low-risk classrooms); these findings contrast with those with parents, where maternal positivity is related to preschoolers’ emotion regulation (Are and Shaffer, 2016; Cho and Lee, 2015). Moreover, teachers’ nonsupportive reactions to children’s emotions were related to less emotionally negative/dysregulated behavior; in general, however, the opposite pattern is found for maternal nonsupportiveness (Berlin and Cassidy, 2003).

Why might these findings obtain? For emotionally negative/dysregulated and emotionally regulated/productive scores, coding originates with a frustrated, often angry child; in the case of the emotionally regulated/productive factor, children are distressed but calmly use words to feel better. Teachers in classrooms where children show such negative emotional behavior may show their own negative emotion in response, and use nonsupportive reactions to quell these emotional outbursts. Dealing with multiple emotional preschoolers at any one time – over weeks – is not easy. Young children, when faced with a somewhat frequently sad or angry teacher who punishes or belittles their emotions, might feel “on their own” in emotional situations, and also become motivated to marshal personal resources to express fewer negative emotions and use words to

### Table III.
HLM analyses examining the contribution of teacher emotions and reactions to children’s emotions, socioeconomic risk and their interactions to children’s emotion knowledge

<table>
<thead>
<tr>
<th></th>
<th>Criterion: total emotion knowledge</th>
<th>Criterion: total emotion knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICC/Level 1 proportion variance</td>
<td>0.32**/0.34</td>
<td>ICC/Level 1 Proportion Variance</td>
</tr>
<tr>
<td></td>
<td>0.32**/0.34</td>
<td></td>
</tr>
</tbody>
</table>

**Fixed effects, Level 2**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Risk</td>
<td>−0.03</td>
<td>−0.08***</td>
</tr>
<tr>
<td>Teacher affective balance</td>
<td>0.02***</td>
<td>Positive emotional responsiveness</td>
</tr>
<tr>
<td>Proportion sadness³</td>
<td>−0.08****</td>
<td>Nonsupportive behavioral reactions³</td>
</tr>
<tr>
<td>Proportion tenderness³</td>
<td>0.00</td>
<td>Supportive behavioral reactions³</td>
</tr>
<tr>
<td>Affective balance × Risk³</td>
<td>0.00</td>
<td>Positive emotional × Risk³</td>
</tr>
<tr>
<td>Sadness × Risk³</td>
<td>0.00</td>
<td>Nonsupportive behavioral × Risk³</td>
</tr>
<tr>
<td>Tenderness × Risk³</td>
<td>0.03</td>
<td>Supportive behavioral × Risk³</td>
</tr>
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**Fixed effects, Level 1**

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<tbody>
<tr>
<td>Sex (1 = female)</td>
<td>0.09***</td>
<td>Sex (1 = female)</td>
</tr>
<tr>
<td>Age in months³</td>
<td>0.01*</td>
<td>Age in Months³</td>
</tr>
<tr>
<td>Premeasure³</td>
<td>0.43***</td>
<td>Premeasure³</td>
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**Random effects**

<table>
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<tbody>
<tr>
<td>Level-1 effects</td>
<td>0.11</td>
<td>Level-1 effects</td>
</tr>
<tr>
<td>Variability between classrooms</td>
<td>7% Δ at classroom level****</td>
<td>% Variability between classrooms 6% Δ at classroom level</td>
</tr>
</tbody>
</table>

**Notes:** *Variable was centered for analysis. *p < 0.05; **p < 0.01; ***p < 0.001; ****p ≤ 0.07
modulate those they do express. Whether these contributions of aspects of socialization of emotion, so often considered nonoptimal in the family literature, continue to have salutary effects would require longer-term longitudinal investigation.

**Problem Question 2: interactive contributions of teacher socialization of emotion**

Teachers’ emotional contributions to children’s increased emotionally regulated/productive behavior aligned well with the parenting literature (e.g. Cho and Lee, 2015). However, teachers’ tender emotional expressiveness also was related to children’s emotionally negative/dysregulated behavior in high-risk classrooms. Tenderness here seemed to serve a dual function – creating a comforting milieu, but perhaps in the cultural context of these high-risk classrooms, too comforting. This interpretation is supported by the counterintuitive finding that, for high-risk classrooms only, teachers’ supportive behavior reactions to children’s emotions were predictive of their emotionally negative/dysregulated behavior. Similarly, emotion knowledge was predicted by positive emotional responsiveness of teachers in high-risk classrooms, and also nonsupportive behavioral reactions to the children’s emotions (similar to Bondy and Ross’ 2008 concept of teacher as “warm demander”).

Considering that children and teachers in high-risk classrooms are more likely to be African–American than in the low-risk classrooms, an examination of these findings from
the perspective of ethnicity and culture is warranted. It has been noted that African–American teachers may be especially open to emotions, putting their socialization at the forefront of an implicit classroom agenda (Parker et al., 2012). At the same time, as noted by Labella (2018; see also Morelen and Thomassin, 2013), this focus on emotions may translate to a more nuanced view, in which “celebration and restriction of children’s emotion coexist closely […]”, perhaps reflecting the joint influences of traditional Afro-cultural values and the historical context of slavery and discrimination” (p. 1). For example, some research has found African–American parents’ supportiveness to act adaptively in young children’s lives (e.g. Bocknek et al., 2009; Garner, 2006). However, African–American mothers, especially for sons, emphasize negative social consequences of showing negative emotions; they report more “nonsupportive” and less “supportive” attitudes toward the emotionality of their children than do European–American mothers (Nelson et al., 2012; see also Parker et al., 2012). These authors suggest that African–American mothers are emotionally stricter to keep their children safe, reflective of their care and concern that their children thrive in a discriminatory society. Nelson et al. (2013) also found that African–American mothers’ lack of encouragement of emotions (e.g. not endorsing “it is OK to cry when you feel unhappy”) predicted kindergarten children’s academic and social competence; our results echo these in the area of teacher contribution to emotional competence.

Given these more fine-grained considerations, considering a unified model of ethnic and emotion socialization is warranted in future research (Dunbar et al., 2017). As we have found, adaptive emotion socialization may include both “supportive” and “nonsupportive” behaviors, such that children not only learn emotional competence skills (as we see here for emotionally positive/prosocial behavior and emotion knowledge), but also when not to show negative emotions (as seen here particularly for emotionally negative/dysregulated behavior and emotionally regulated/productive behavior). Thus, “supportiveness” and “nonsupportiveness” can be considered ethnically bound terms; current categorizations of adaptive and maladaptive emotion socialization practices may not be applicable universally to individuals from different ethnic backgrounds. It behooves researchers of socialization of emotion to consider carefully their terminology and the logic models underlying their predictions; along with early childhood educators, we, too, must become culturally competent.

Limitations and future research
There are, as with any research, methodological and analytical limitations that bear on conclusions from our findings. First, we were enjoined from asking questions about family income, rendering our classroom proxy of socioeconomic risk the only possible marker to use. This injunction is not unusual; perhaps, however, knowing fuller socioeconomic information on actual income, chaos level in the home and material hardship could add to our understanding in future research. Furthermore, we did not add race/ethnicity of teacher or child in equations because classroom risk status also formed a reasonable proxy marker for this attribute, but future research could more specifically pinpoint this information, especially given the important moderation by socioeconomic risk found here.

Further consideration of the mechanisms behind these findings is also appropriate. Designs with more detail about each teacher–child emotional transaction (e.g. learning context, verbalizations involved, specific children’s responses) could be useful toward this goal. Mixed-method designs also could be useful, especially regarding views on socialization of emotion techniques in nonEuropean–American teachers, triangulating qualitative information on teachers’ reasoning, values and beliefs about their emotions and reactions to children’s emotions with quantitative information like that reported here; our moderation analyses bear further elucidation.
Potential applications

Even given the preliminary status of our findings, some suggestions can be made for optimizing preschool teacher training and practice. Many early childhood teachers are 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, but this is not always the case, and there are, as found here, differences in teachers’ enactment of adaptive practices (Zembylas, 2007; Zinsser et al., 2014, 2015). Thus, teachers and their supportive administrators, as well as pre-service teachers, could profit from attention to and training in these issues (Garner, 2010; Waajid et al., 2013).

First, 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 children’s emotional competence. For example, preschool teachers’ emotional competence is related to their reactions to children’s emotions; lack of emotional awareness has been associated especially with nonoptimal socialization of emotion techniques (Ersay, 2007, 2015).

Jennings and Greenberg (2009) have suggested ways to promote teacher emotional competence, including: mindfulness training to maintain positivity and calm (Jennings, 2015; Kemeny et al., 2012); reflective supervision to gain access to and understand their own emotions (Gilkerson, 2004); stress reduction to aid in reacting optimally to children’s emotions (Buettner, Jeon, Hur and Garcia, 2016) and direct training. Regarding direct training, Kremenitzer (2005) and Kremenitzer and Miller (2008) give excellent, concrete suggestions on how teachers can become aware of their own emotional competence and its effects on children, especially via “emotional intelligence journaling.”

Second, to promote children’s emotional competence more specifically, teacher training could focus on increasing teachers’ willingness to show emotions, as well as their abilities to remain emotionally positive in the classroom despite challenges and modulate understandable negative emotions (Kremenitzer and Miller, 2008; Shewark et al., 2018; Zinsser et al., 2014, 2015). Teachers could be assisted in valuing their supportive role concerning children’s emotions, and given specific strategies to use in reacting to children’s more difficult emotions (e.g. anger, fear, sadness, even over-excitement). Sensitivity to the issue that “supportive” and “nonsupportive” techniques are culturally/ethnically bound would be absolutely necessary.

Conclusion

Our research is among the first to examine teacher socialization behaviors in their contribution to young children’s emotional competence. As noted by Jones and Bouffard (2012), these contributions constitute everyday strategies based on kernels of evidence, “essential ingredients” compared to the “brands” of curricula. Continued pinpointing of these behaviors can benefit both teachers and children in the crucial promotion of emotional competence for both.

References


Further reading

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“My BEST friends, the books”

Discussing with preschoolers about picture book characters’ social-emotional skills

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Panteion University of Social and Political Sciences, Athens, Greece

Abstract

Purpose – The contribution of children’s literature to the social-emotional development of children has been recognized across disciplines. Especially picture books, as multimodal texts which communicate with young readers with two codes simultaneously, can be a potential means of fostering empathy in young children (Nikolajeva, 2013). The purpose of this paper is to introduce the program “My BEST friends, the books,” an empirical project (in progress) based on a Book-Based Emotional Social Thinking approach.

Design/methodology/approach – This approach is inspired by the Critical Thinking and Book Time approach (Roche, 2010, 2015). The program, based on the scales and competences of the Bar-On (2006) model of social-emotional intelligence, explores the way young readers interpret social-emotional skills when discussing about literary characters in children’s picture books. This paper examines the philosophy, the main characteristics and structure of the program, and presents the first results of the pilot phase.

Findings – The initial findings indicate that the design and implementation of such a program is a complex procedure that requires from the researcher to take into consideration various aspects that concern both the material and the participants, but also to step back and let children express their thoughts freely.

Originality/value – Moreover, such discussions allow for understanding how preschoolers interpret the social-emotional skills of literary characters in a critical manner.

Keywords Critical Thinking, Picture books, Greek children’s literature, Social-emotional intelligence

Paper type Research paper

1. Introduction

During the last decades, education focuses in a humanistic approach emphasizing the social-emotional development of children. The necessity of such an approach in early childhood education is worldwide recognized. According to Bagdi and Vacca (2005) “the experiences that children have from zero to five years old set either a strong or a fragile platform for what happens next in childhood and beyond.” When social-emotional skills are not practiced in the early years, the gaps in students’ social-emotional development become evident (Poulou, 2015). In addition, teachers integrate into their teaching practices a great variety of interesting ways to attract children’s attention help them express themselves and stimulate them to think about themselves and the world. According to Sipe (2008) stories maybe one of the most powerful ways we have of imposing order and meaning to our world. This paper introduces the program “My BEST friends, the books,” an empirical project (in progress) based on a Book-Based Emotional Social Thinking (BEST) approach, aiming to place children in the center of educational action and explore their ideas about literary characters’ social-emotional traits and competencies.
2. Theoretical framework

2.1 Social-emotional profile (SEP) programs in preschool education

According to the Collaborative for Academic Social, and Emotional Learning (CASEL Guide, 2013) Social-Emotional Learning (SEL) is defined as “the process through which children acquire and effectively apply 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.” Many SEL educational programs for preschool education are included in “2013 CASEL GUIDE – Effective Social and Emotional Learning Programs, (https://casel.org/preschool-and-elementary-edition-casel-guide)” such as Al’s Pals, High-Scope educational approach for preschoolers, I Can Solve Problem, PATHS, etc. All the programs focus in training preschoolers in social-emotional skills and competencies, such as recognition of feelings, problem-solving, positive interpersonal relationships, etc. Special mention should be made to the “4Rs” (reading, writing, respect and resolution) program, as it actively involves literature. The “4Rs (www.morningsidecenter.org/4rs-program)” program is based on a read aloud activity of children’s books, carefully selected for their high literary quality and relevance to the subject and continues with writing, discussing and practicing skills, aiming in encouraging care, responsible behavior, understanding emotions.

The Center on the Social and Emotional Foundations for Early Learning (http://csefel.vanderbilt.edu/resources/training_preschool.html) is a five-year project designed to strengthen the capacity of Head Start and child care programs to improve the social and emotional outcomes of young children (http://csefel.vanderbilt.edu). In the practical strategies a Book List of children’s literature books related to several social-emotional subjects, Scripted Stories for Social Situations and Book Nook – activities related to children’s books – are proposed to help children think about social interactions, situations, expectations and crucial social cues. The Pyramid Model for Promoting Young Children’s Social-Emotional Competence (www.pyramidmodel.org) is also a framework for organizing research-based practices for use in early childhood classrooms to promote social-emotional competence and prevent and address children’s challenging behavior. All the programs use supplemental materials such as books, puppets and posters to assist children when labeling their own or their classmates’ emotions.

In Greece, the best known programs are: The Trying Fish – A Program of Emotional Education for Early Childhood Education (Thanou, 2009) which was developed as part of a doctoral thesis, aiming to enhancing self-acting and shaping an optimistic interpretation style, and Steps for Life – A Personal and Social Skill Program for the Kindergarten (Kourmousi, 2013), a manual of activities and games for adapting to the school environment, recognizing emotions, assessing situations and solving problems.

2.2 Early childhood education, children’s literature and social-emotional intelligence in Greek curriculum

The Greek curriculum for early childhood education (Pedagogical Institute, 2011) recognizes the importance of early childhood education as a period in which the foundations for the development of children and their subsequent attitude toward learning are established. Among its basic principles are personal empowerment and the development of a healthy personality. Enhancing personal and social development allows children to:

- recognize themselves as distinct persons with special abilities and value;
- operate with relative autonomy;
- accept their emotions and control their expression;
- encounter difficulties and resolve conflicts, respect others as well as the group rules;
• understand the feelings and opinions of other people; and
• communicate and collaborate with others.

The content of personal and social development in the curriculum for early childhood education concerns identity, self-regulation, personal empowerment and development of social skills and the social interaction in the school environment. According to the curriculum when children finish early childhood education should be able to:

• identify with their personal characteristics, opinions and choices;
• gain positive self-esteem (sense of value and effectiveness);
• recognize, express and manage their feelings;
• read stories and report events that have caused similar feelings to themselves;
• withstand deprivation/failure;
• manage their relationship with their family;
• be familiar with life events;
• resolve conflicts;
• become empathetic; and
• accept diversity.

The above objectives can be achieved during everyday school life through the appropriate resources and activities. Thus, children are invited to express their feelings with their own words or drawings based on stories, works of art, etc. Through literature, children are encouraged to express pleasant, unpleasant and contradictory feelings, to discuss stories about the particular needs of some people, to suggest ways to resolve conflicts in incomplete stories, to guess how the heroes of a story feel, to interpret emotions from facial expressions in pictures or real persons and express their thoughts on the feelings and thoughts of the hero. Therefore, the Greek curriculum for early childhood education pays a great attention to the importance of children’s literature, and especially picture books, as a means of fostering children’s social-emotional development.

2.3 A “Book-Based Emotional Social Thinking” (BEST)

The philosophy of the program “My BEST friends, the books” is based on the “Critical Thinking and Book Talk” approach (CT & BT) (Roche, 2010, 2015). Roche exploits the choice of picture books as a stimulus for thought and discussion, considering children as active participants in building their own personal learning and development. Critical Thinking involves thinking about one’s self, making sense and meaning of one’s own life and the world (Roche, 2015, p. 5). Such an approach requires effort, time, active involvement of the participants and discovery. Moreover, it requires from adults to consider children as real people and talk with and to them (p. 19). In an analogy with CT & BT, we named our approach BEST because we use picture books as a stimulus for discussing with children about social-emotional skills and competences of the literary characters. The basis of the approach consists of two crucial elements: high quality picture books which attract children’s attention and interest; and an open, dialogic teaching environment empowering students to freely express their thoughts and ideas on social-emotional issues.

The primary aim of the program “My BEST friends, the books” is to explore how preschool children understand and interpret the representation of social-emotional skills presented in picture books. Nikolajeva (2012) examines how emotions can be transferred to young readers through the interaction between words and images in picture books. Among other things, she uses the concept of emotion ekphrasis to describe the verbal, visual or
multimodal means used to represent a feeling. She emphasizes on issues of theory of mind and empathy and examines how understanding other people in the real world can be enhanced by multimodal texts. However, she states that her approach is theoretical, has no empirical evidence, and may inspire scholars who work with books and children to test the ideas in practice. Nikolajeva (2013) also notes that picture books, although widely used to support literacy or visual literacy skills, are largely neglected in their contribution to emotional development of children. Nikolajeva concludes that if we read fiction because we want to know more about ourselves and other people, picture books are an excellent first step toward emotional intelligence.

3. The program “My BEST friends, the books”

3.1 Structure and characteristics of the program

The program “My BEST friends, the books” is based on the principles of SEL, it is in line with the developmental level of the age group in which the intervention takes place, as well as with the Greek curriculum for the early childhood education (Pedagogical Institute, 2011). The implementation of the program in preschoolers was approved by the Greek Ministry of Education, Research and Religious Affairs and the Institute of Educational Policy of Greece (November 2018). The program is structured in six modules, which follow the scales of the Bar-On (2006) SEL model. These modules are:

1. Intrapersonal skills: self-awareness and self-expression (self-regard, emotional self-awareness, assertiveness and independence);
2. Interpersonal skills: social awareness and interpersonal relationship (empathy, social responsibility and interpersonal relationship);
3. Stress management: emotional management and regulation (stress tolerance and impulse control);
4. Adaptability: change management (reality-testing, flexibility and problem-solving);
5. General mood: self-motivation (optimism and happiness); and
6. Completion of the program.

Each module consists of three activities, that last approx. 30–35 min in total. During each module a different picture book is read. All three activities of each module are completed in one session. These activities are:

1. An introductory/exploratory activity: the main goal is to explore what preschoolers think about the concept which will be examined in each section. The introductory/exploratory activity is carried out by the class teacher. The researcher participates as an observer. The estimated duration of this activity is 5–6 min. One open question on the concept of each module is the base of the discussion, such as “What do you think that the phrase I trust myself mean?”

2. The main reading activity and discussion: reading and discussing about books is the main activity of each module. Though the duration of the activity can be quite flexible, depending on the team’s attention, usually it lasts up to 15–20 min. This activity is implemented by the researcher in collaboration with the class teacher. During the reading the researcher asks open questions about children’s opinion on the feelings of the characters and especially about the elements of visual and verbal text which reveal to them the SEP of the characters.

3. A developmental activity: the final activity of each module is inspired by the plot and the characters of the book and it is carried out by the class teacher.
The researcher participates as an observer. The estimated duration of this activity is 7–10 min. Through this activity children are invited to express their opinion, feelings and thoughts on the story, participate in a role-play activity or express themselves through an “If I were the hero [...]” activity.

The whole program (modules, activities, goals, etc.) is described in detail at the Appendix, at the end of this paper.

3.2 The program’s materials
The program’s materials consist of picture books, puppets and other accessories. We chose to use five picture books. All of them have been awarded in the major literary competitions in Greece[1] during the last three years. According to Lewis (2001, p. 2), using the award as criterion does not fully guarantee their quality, but “it is a suggestion that these books belong among the best of their kind and are to some extent distinguished for their quality.” Also, the selection of awarded books published in different years and awarded by different committees “is a checklist that ensures that these books are not the personal choice of a closed group of critics.” From the corpus of the awarded children books, our selection for the program was based on a series of criteria, such as books created by different authors, illustrators and publishers, the book’s theme, the characteristics of the program’s target age group, the narrative techniques and the quality of verbal and visual texts. The books have been awarded in different categories, such as Best Picture Book, Non-fiction Book for children, Short Stories for children. The selected books are:

- Pipini, A. (2016), Melak, all Alone, Illustrated by Achilles Razis, Kaleidoscope Publications, Athens[6].

The accompanying materials (puppets and accessories) were created by the researcher and were mostly used during the developmental activities, to stimulate children to talk about the characters’ emotions and thoughts.

3.3 Discussing with preschoolers about picture books’ characters – the pilot study
We applied a qualitative method, since our research questions were related to the qualitative characteristics of preschoolers’ thinking about the interpretation and use of social-emotional skills. Thus, the methodology adopted was a combination of “participatory observation” along with “group photo elicitation,” where photos have been replaced by picture books. As data-collecting tools we used the children’s recorded talk during the activities, their drawings created during post-reading activities, as well as the researcher’s notes.

The pilot study was implemented in an Early Childhood Education Centre in Athens, Greece (November 2018). Eight children (four boys and four girls) aged four to eight years participated in the reading activities. The pilot study aimed to help the researcher familiarize herself with the research plan, identify potential difficulties regarding the
formulation of the questions and detect potential procedural deficiencies. The participants were participating to school activities for at least two years and to organized reading activities implemented by the school[7]. For the pilot study, we chose to apply the second module: interpersonal skills (interpersonal relationships, empathy and social responsibility). The session lasted 30 min and included all three designed activities.

Introductory/exploratory activity: “My own and Your point of view!”.

- Objective: to detect children’s perceptions of the concept of “point of view.”

During this activity, children reacted either arguing or laughing. A characteristic dialogue was the following:

(1) Two children stand back to back. They describe in turn what they see:
   - Child 1: I see a window and the yard.
   - Child 2: I see the door of the classroom.
   - Child 1: No, this is the window. I can see outside.
   - Child 2: I can see outside the classroom too. But it is not the yard. It is the corridor.

(2) They turn 180° around. They describe again:
   - Child 1: Now I see the door of the classroom (laughing).
   - Child 2: I see the yard through the window.
   - Child 1: But I was seeing a window too when I was like that – the child turns around at the previous position, next to the other child to explain. We have many windows (laughing).
   - Child 2: Go back to your place, this is my place! (Rather annoyed).

After the four couples completed the activity, we discussed about their experience, based on four questions posed by the researcher:

(1) “Why we see different things even when we are at the same room?”
   - Because we are different.
   - Because we have other eyes.
   - Because I know better.
   - Because the room is too big.
   - Because I see what I want, and the others see what they want.

(2) “Why did you change the way you see things?”
   - We turned around.
   - I got his place and he got mine.
   - We saw the same things then.

(3) “Who was right, then?”
   - I was right because I saw it.
   - I was right because, you see, this is the window.
   - I was right because the other child was like that (he takes the position his couple previously had).
(4) What do you think “Put myself in your place[8]” mean?
- I take your chair.
- We change places. I take your chair and you take mine.

Even though preschoolers experienced the change of their position in space and they mentioned it in their answers, it was too difficult to accept that the other participants were also right when expressing a point of view different from theirs. This is in agreement with the self-centeredness way of thing of preschoolers, according to Piaget’s theory, the tendency to see the world from one’s own point of view unable to recognize its different perspective or the different thinking of the others. The metaphorical meaning of the expression “I put myself in your place” – which for adults is usually connected with the skill of empathy – was interpreted by preschoolers with its literary meaning related to the change in space. Thus, the researcher had to change the initial formulation.

*Book reading activity.*
- Objective: to engage preschoolers in dialogue expressing their point of view and justify it with arguments, looking at the picture book.

We read the story “*Does the Real Dinosaur feel afraid?*” and discussed about the hero’s relations to his peers. The discussion aimed to explore questions such as:

(1) “Does the hero have friends at the beginning/end of the story?”
- No, he has no friends. They tease him (beginning).
- He is alone. Nobody plays with him (beginning).
- They don’t want to play football with him. They are not his friends (beginning).
- Now they are all friends. They dance all together (end).
- Yes, they play together now (end).
- He has a friend, the Real Dinosaur. Not the other kids (end).

(2) “How does the hero feel at the beginning/end of the story?”
- He is feeling sad because he does not have friends (beginning).
- He does not feel welcomed because they tease him (beginning).
- They laugh at him. He wants to cry (beginning).
- Now he can be happy, that he has a friend (end).
- He does not cry anymore because they play with him now. And he has the Real Dinosaur (end).

(3) “What can we understand about Paris’ relationship to his friends through words and images?”
- They are not his friends. They are pointing at him. They tease him (The child shows the giant fingers pointing at the protagonist).
- He is not happy. He holds his head and his mouth is like that (The child shows the sad mouth in the picture).
Look at his eyes. He is like the Dinosaur. When they see him they will go away (The child shows a double spread that depicts Paris full face, in a very close shot, front and direct angle to the reader, staring at the bullies) (Dermata et al., XXX).

They are holding hands. Now they are all friends.

Children’s reactions reveal that non-verbal communication as depicted in picture books is the first thing they notice when they discuss about the emotional state of the characters. As Dermata and Skarpelos (2017) note, the recognition of facial expressions and body language of the depicted heroes was the predominant element for the interpretation of visual modality.

Developmental activity/expansion activity: Does the Real Dinosaur Feel Afraid? Taking as a starting point the final sentence of the book “Did you, the Real Dinosaur, feel afraid?,” each child animated the dinosaur doll and expressed his/her own thoughts and feelings about the story. The main answers were:

- I was not afraid. I was angry that nobody played with Paris.
- I was sad. Nobody would play with Paris and me. I was thinking to leave school.
- If they didn’t play with me, I would have eaten them. I would be too angry.
- I was afraid. I had no friends to play with.

4. Discussion and limitations of the study

The aim of the paper was to introduce “My BEST friends, the books” program, a BEST approach, aiming to explore how preschoolers perceive and interpret social-emotional skills. When designing the program the researcher had to solve two issues. The first had to do with the choice of the books. In the Greek market too many picture books are available. The criterion of the awarded books assisted in reducing the corpus studied. Then, the choice was made based upon the criterion of which book could better present the skills studied in every module. This choice does not imply that each book is related only to the specific social-emotional skill that it is chosen for, but rather that this skill is central to the story and can be used as a stimulus when discussing with preschoolers. Moreover, we claim that “in picture books, with the limited verbal text, the development of the characters may not be complete […] but there are always some traits revealed to the reader through both words and images, and their synergy. Because of the picture book’s multimodal character, the level of interpretation plays a central role in this approach” (Dermata et al., XXX).

The second issue was related to the restrictions and limitations of the context where the program is going to be implemented. The initial educational program included a wider range of activities, structured in 14 modules. This extended program offered the opportunity to devote more time to each one of the concepts and to widely develop the activities of each reading in two meetings. The limited time given to the researcher – not for the pilot phase but for the main research – forced the researcher to design a shorter educational program and focus in a qualitative rather than a quantitative approach.

As this was a pilot study, the researcher had the opportunity to experience the first contact with the preschoolers on the basis of the BEST. The pilot implementation revealed that when designing a set of activities based on discussion, the formulation of questions addressed to children-as-participants is crucial. A challenge is to step back and let the readers express themselves in a free and open manner.

We also understood that, when talking about picture books, children are willing to offer explanations based on verbal and visual elements but they also rely on personal experiences. Thus, a systematic content analysis of the picture books texts in combination
with interpretative phenomenological analysis (Smith et al., 2009) of the words used by children would provide a deeper understanding of how preschoolers perceive and interpret social-emotional skills. If reading offers the readers a way to think about themselves, such an empirical research places young readers to the center of scientific interest as active participants, whose opinions, thoughts and ideas are valuable. As the program is – at this time – under full implementation, we believe that in the near future we will be able to share more from our empirical research with children and picture books in the field of this social-emotional literacy perspective.

Notes
1. The main organizations that have established awards for children’s literature in Greece are: the Greek Department of IBBY – The Circle of the Greek Children’s Book, the Ministry of Culture and Sports and “Anagnostis,” an e-journal magazine for the book and the arts.
3. “Vito Aggelopoulou” Award for children’s information texts, by the Greek Section IBBY 2016.
4. Best Picture Book Awarded by the Greek Section of IBBY 2018.
5. “Penelope Maximou” Award for SFS for children, awarded by the Greek Section of IBBY 2015.
7. The children have been participating in the “Feed me books’, Mr. Bookmouse said!” a reading promotion project implemented by the researcher in Early Childhood Education Centre of Athens.
8. “I put myself in your place” in Greek is the equivalent of “I put myself in your shoes.”

References


Further reading


Appendix
In this appendix the full structure of the program – division into modules – is described.

First module: intrapersonal skills (emotional self-awareness, assertiveness and self-regard)
Exploratory/introductory activity: “I trust myself”

- Objective: to detect children’s perceptions about the concept of trust, and, in particular, self-confidence.

Through group discussion, the researcher notes what children believe about assertiveness and self-regard, and what they understand as the meaning of the phrase “I trust myself.”

Book reading activity

- Objective: to engage preschoolers in dialogue expressing their point of view and justify it with arguments.


The discussion aims to explore questions such as:

- “Does the hero have confidence in himself and his forces at the beginning, during/at the end of history?”

- “Does the hero claim for himself what he wants at the beginning/during/at the end of the story?”

- “How is the hero’s confidence in himself revealed through words and pictures?”
Development activity/expansion activity: “My strong points!”
- Objective: to have the children think and talk about their own strengths and their own strengths (what they do, they like to do). Boosting self-esteem and efficiency.

On a piece of paper, each participant draws his/her own strengths and, if he/she desires so, can present it to the group.

Second module: interpersonal skills (interpersonal relationships, empathy and social responsibility)
Introductory/exploratory activity: “Mine–Your point of view!”
- Objective: to detect children’s perceptions of the “point of view.”

The children stand in pairs, back to back. When instructed by the teacher, one child describes what he/she sees. Then the second child of the couple describes what he/she sees. They then rotate 180° so that each participant is in the starting position of his teammate. They describe again what they see from their new position. Then they express their thoughts on what the phrase “My own and your point of view!” may mean.

Book reading activity
- Objective: to engage preschoolers in dialogue expressing their point of view and justify it with arguments.

The discussion aims to explore questions such as:
- “Does the hero have friends at the beginning/middle/end of the story?”
- “What does he feel, what does the hero/other characters of the story think?”
- “What can we understand about Paris’ relationships with his friends through words and images?”

Developmental activity/expansion activity: Does the Real Dinosaur Feel Afraid?
- Objective: to develop participants’ empathy skills by taking the place of another through the use of the doll, to recognize and express the feelings of different heroes and to relate them to events of the story and to their own thoughts.

By stimulus the last phrase of the book “Did you, the Real Dinosaur feel afraid?” the group discusses with the dinosaur puppet about his feelings. Each child animates the puppet and expresses his/her own thoughts and feelings about the problem of the hero.

Third module: adaptability (problem-solving, checking reality and flexibility)
Introductory/exploratory activity: “Problems!”
- Objective: to explore children’s ideas about the meaning of the consent “problem,” to recognize their personal characteristics, to exchange information, to realize that one’s problem maybe others’ problem too, to negotiate solutions and to speculate about the problems and their potential solutions.

The team members share their ideas about the concept of “problem.”

Book reading activity
- Objective: to express the participants’ views about the situations and events the story heroes face, to discuss about their (the heroes’) problems and needs.
The discussion aims to explore questions such as:

- “What problem does the hero of history face?”
- “How is the problem revealed to the reader through words and images?”
- “What did the hero do to solve his problem? What would you do if you were in his place?”

Development activity/expansion activity: “How do we solve this problem?”

- Objective: to develop dialogue and arguments about potential solutions to a problem (brainstorming) and collaboration through role-playing games.

Hats with heroes’ figures are placed in the center of the classroom. The teacher shows the picture where the three heroes draw a plan. The children choose the hat they want, and they argue through a brief improvisation what they would do to address the problem the “Be family” was facing.

Fourth module: managing anxiety (tolerance to stress and impulse control)

Exploratory/introductory activity

- Objective: to detect children’s perceptions about the emotional content of words, and in particular of the phrase “all alone.”

Through group discussion, the researcher notes what children believe is the meaning of the phrase/title “all alone.”

Book reading activity

- Objective: to guess how the heroes of stories feel when they are in a situation and to express their views on the hero’s feelings and thoughts.

The discussion aims to explore questions such as:

- “What does the hero feel at the beginning/during/at the end of story?”
- “How are protagonist’s feelings revealed through words and images?”

Development activity/expansion activity: “Show me how you feel!”

- Objective: to interpret the feelings of heroes in fairy tales and to express them through facial expressions in images or words, to express and communicate their feelings through elements of non-verbal communication.

The teacher shows some pictures of the book. Participants express with their face and body what they feel about what they see (e.g. Melak is in the middle of a crowd, many people on board, etc.). Then the teacher describes mental pictures (e.g. I am in a park, I look at the sea, I hear a loud sound, etc.) and the group expresses its feelings for the mental pictures only by elements of non-verbal communication.

Fifth module: general mood (happiness and optimism)

Exploratory/introductory activity: “Happiness and Optimism”

- Objective: to detect children’s perceptions of the concepts of “Happiness and Optimism.”

Through team discussion, children express their thoughts about the concepts “Happiness” and “Optimism.”
Book reading activity

- Objective: to talk about stories, to try to guess how the heroes feel when they are in a fantastic situation and to be concerned about the adversities that may happen in life and how to deal with them.

The discussion aims to explore questions such as:

- “How does the hero feel in every new situation he faces?”
- “What does he think about the new things he sees around him?”
- “What would you think if you were in his position?”

Development activity/expansion activity: “What would you do if […]”

- Objective: to develop strategic thinking skills, to devise imaginative solutions to hypothetical problems and to confront with optimism the potential difficulties.

Children in pairs represent with the use of dolls the discussion of the two protagonists. They take turns in asking, “What would you do if […]” and complete the phrase with some obstacle that could be encountered in their attempt to meet each other (e.g. what would you do if a big truck landed on your way?)

Sixth module: completion of the program
Closing activity: “My BEST friends, the books”

- Objective: to develop critical capacity, express personal opinion and choose on the basis of their personal interests.

In the center of the classroom we place all the accessories, dolls and books used in the program. Every child chooses a hero and draws him on paper. Then he/she presents the hero and describes to the group who he is and which is the characteristic that made the hero stand out from the others.

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Facilitating success for people with mental health issues in a college through cognitive remediation therapy and social and emotional learning

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Abstract

Purpose – The purpose of this paper is to describe the components, structure and theoretical underpinnings of a cognitive remediation intervention that was delivered within a supported education program for mental health survivors.

Design/methodology/approach – In total, 21 participants enrolled in the course Strengthening Memory, Concentration and Learning (PREP 1033 at George Brown College (GBC)) with the diagnosis of depression, anxiety, PTSD, ED and substance use disorder were included in the research. After a baseline assessment, participants completed 14 week cognitive remediation training (CRT) protocol that included six essential components that were integrated and implemented within the course structure of the supported education program at GBC. This was followed by a post-training assessment.

Findings – Analysis of the participants' performance on CRT protocol using computerized games showed little significant progress. However, the research found a positive change in the self-esteem of the participants that was statistically significant and the findings also aligned with the social and emotional learning framework.

Research limitations/implications – One of the limitations in the research was the use of computer-assisted cognitive remediation in the form of the HappyNeuron software. The value and relevance of computer assisted needs are to be further examined. It seems that the implementation of the course that explicitly address cognitive challenges creates a supportive environment can be helpful.

Practical implications – Despite the mixed results and the few limitations associated with the CRT intervention reported in the research, the study offers reminders of the complexity of cognitive remediation and all the factors involved that need to be taken into consideration.

Social implications – This research created explicit space for addressing some of the implicit assumptions about the cognitive abilities when in post-secondary education.

Originality/value – This work is based on author’s previous work on cognitive remediation research within the supported education setting.

Keywords  Cognitive remediation training (CRT), Cognitive science

Paper type Research paper
Introduction
Research evidence indicates that many neuropsychiatric illnesses are associated with dysfunction in prefrontal neural systems that underlie perception, cognition, social interactions, emotion regulation and motivation (e.g. Bush, 2010; Eisenberg and Berman, 2010; Koob and Volkow, 2010; Price and Drevets, 2010). These symptoms, in turn, have a major impact on psychiatric patients’ ability to function socially and vocationally, and their response to psychiatric rehabilitation (McGurk and Mueser, 2004; Miller et al., 2007).

Treatments and intervention pertaining to cognitive impairments are often complex and involve the use of mediational tools, social skills, mindfulness-based cognitive interventions and the modeling of empowering strategies. There has been a convergence of evidence that demonstrates that these strategies increase psychological well-being and lead to greater satisfaction with life for adults in clinical settings (Keng et al., 2011); enhance social and emotional competencies; improve pro-social behaviors; and result in better school performance (Durlak et al., 2011). Mindfulness practices enhance one’s ability to observe external factors and internal reactions and fosters the self-control to be able to pause and reflect before taking conscious action. Evidence suggests that mindfulness training with adults can also improve cognitive abilities, such as attention, working memory and inhibitory control (Chiesa et al., 2011).

This paper reports the procedures and outcomes of a cognitive remediation intervention protocol that included offering tangible and practical strategies to cultivate social-emotional skills integrated within a supported education program to facilitate access to post-secondary education and improve quality of life prospects for people with serious with mental health issues. The study builds on and contributes to the growing body of research that attests to the efficacy of cognitive remediation training (CRT) for specific populations.

Defining the axes of cognitive remediation training (CRT)
CRT represents a learning-based, non-pharmacological intervention aimed at achieving improvements in cognition and/or the self-management (Saperstein and Kurtz, 2013) that can been negatively impacted as a result of mental illnesses such as schizophrenia (Cella et al., 2017), bipolar disorder (e.g. Fuentes-Durà et al., 2012), obsessive compulsive disorder (e.g. Buhlmann et al., 2006) and eating disorders (e.g. Tchanturia and Davies, 2010; Dingemans et al., 2014). More broadly defined as “brain training which refers to the engagement in a specific program or activity with the aim to enhance a cognitive skill or general cognitive ability as a result of repetition over a circumscribed timeframe” (Rabipour and Raz, 2012, p. 159). Some of the cognitive domains for training include perceptual discrimination, visual search, recognition, recall and spatial perception (e.g. Kramer et al., 2004). Along with the cognitive training, CRT often focuses on developing strategies that support concentration and attention such as relaxation, personal insight, self-monitoring, motivation and problem-solving (e.g. McDougall, 2000). The ultimate goal of CRT is “generalization to untrained cognitive skills as well as transfer to real-world psychosocial outcomes” (Bryce et al., 2016, p. 92). Many CRT interventions can, therefore, involve “repetitive training exercises (i.e. drill-and-practice), strategic discussions about how to manage cognitive difficulties and how training tasks are relevant to areas of everyday life, or a combination of both” (McGurk et al., 2013). These “bridging activities” (Bowie et al., 2012) and the inclusion of strategies to address individuals’ underlying beliefs and motivation (Medalia and Saperstein, 2011) are essential components of any CRT intervention. Dingemans et al. (2014) further clarified that CRT focuses on changing how patients think and not what they think about, by helping patients develop “flexible styles of thinking,” notably by working on metacognitive strategies. This flexibility leads to the proliferation and refinement of neural connections. The change in thinking or underlying beliefs is facilitated by cognitive behavioral therapy, that is a goal oriented, short term
psychosocial intervention that takes a hands-on, practical approach to problem-solving to shift patterns of thinking or behavior to change the way people feel.

It is important to understand that psychosis involves complex interactions between different symptoms and levels of impairment. Understanding these interactions is at the foundation of the CRT approach in working with people with mental health challenges. There is ample evidence in the literature indicating that rehabilitation depends on potential improvements in working memory, reward sensitivity and executive functions such as planning and sequencing of actions to problem-solving (e.g. Cella et al., 2017; Dingemans et al., 2014; Farreny et al., 2013). All these facets of psychosis are acknowledged and systematically addressed in CRT interventions.

Moreover, numerous studies document a negative relationship between psychiatric symptoms and self-esteem (Iqbal et al., 2000; Lysaker et al., 2008; Thewissen et al., 2011). In this regard, CRT has been found to boost patients’ self-esteem, and the self-esteem tends to increase motivation and a general sense of agency (e.g. Østergaard Christensen et al., 2014). In fact, high self-esteem is likely to be a protective factor or a buffer against the effects of negative experiences. High self-esteem contributes to positive social behavior. It is also associated with mental well-being, adjustment, happiness, productivity, coping, success and satisfaction (Baumeister et al., 2003). High self-esteem may also protect against depressive symptoms by decreasing the impact of negative thoughts (Orth et al., 2009).

Similar outcomes are evident using social and emotional learning (SEL) framework within educational settings. SEL is the process of providing students with the opportunity to learn, acquire and practice the social-emotional competencies of self-awareness, self-management, social awareness, relationship and responsible decision-making skills needed to succeed in life (Greenberg et al., 2003; Osher et al., 2008). It explicitly promotes skill building for improved attitudes and beliefs about self and others, positive social behaviors, enhanced self-esteem, reduced emotional distress, better adjustment and higher grades and academic performance (Durlak et al., 2011; Greenberg et al., 2003) and constructive engagement in learning (Denham et al., 2010).

Documented outcomes of CRT studies
CRT has been found, in numerous randomized controlled trials, with varied populations to have a positive impact on cognitive and psychosocial functioning (Cella et al., 2017; Fiszdon et al., 2005; Kurtz et al., 2007). For instance, Bryce et al. (2016), in an exhaustive systematic review and meta-analyses of studies on the efficacy of CRT for patients with schizophrenia concluded that the outcome of CRT is generally positive. They specify that “neurocognitive remediation can produce moderate improvements in global cognitive functioning as well as real-world psychosocial functioning” (p. 93), especially if combined with other interventions such as vocational training. Buonocore et al. (2018) pointed out that, while the efficacy of the CRT is now widely accepted by the research community, the durability of its effects and the possibility of generalization of cognitive improvement to functional outcomes are still open to debate. Therefore, they reassessed 60 patients diagnosed with schizophrenia five years after they completed a six-month intervention in which standard rehabilitation was combined with a three-month CRT. They found that the patients’ cognitive abilities remained stable after five years, but the functional performance decreased significantly in patients who did not undergo a follow-up rehabilitation following the initial treatment. The authors recommended that CRT should be consolidated by some form of standard rehabilitation to ensure durable and long-term results. In this regard, Dingemans et al. (2014) noted that, while CRT is distinct from therapies based on environmental modifications (e.g. social-skill training and external compensatory methods), there is value in combining aspects of cognitive training and other types of therapies.
Despite the many positive outcomes listed above, there are many criticisms of using computer assisted CRT with specific populations including children diagnosed with ADHD, people with traumatic brain injury, geriatric population, people with mild cognitive impairments, etc. The field “often rely on claims that are scientifically unsubstantiated” (Rabipour and Raz, 2012) with mixed evidence for real-world benefits. These research studies are fraught with conflicts of interest issues as the commercial companies provide the resources and sponsor the research impeding on their objectivity and compromising the integrity of their research (Rabipour and Raz, 2012). These studies have also been criticized for methodological shortcomings (Simons et al., 2016).

However, based on the research in the last two decades, new insights into neural plasticity have resulted in a revival of these studies resulting in the hypothesis that both structural and functional brain changes may occur after intensive, repeated training (Park and Bischof, 2013). And, the field of cognitive training has also evolved over the years with more customized and intensive approaches that are geared to the individual challenges, adapted to their specific needs with more challenging tasks as they progress, user friendliness in conjunction with the bridging activities that enhance the transferability of these gains.

Documented effectiveness of SEL applied to people with mental health issues
There is an increase in mental health issues globally. In Canada, one in five Canadian’s experience mental illness or substance use issues (Smetanin et al., 2011). By the time they reach the age of 40, one in two adults have mental health issues (Smetanin et al., 2011). More than half of these adults with mental health issues report the onset of their challenges in childhood or adolescence (Kessler et al., 2005). SEL offers promising practices to counter these challenges by offering a proactive framework that tend to jeopardize young people’s positive development and success in life (Centers for Disease Control and Prevention, 2013). SEL interventions can be offered as universal (to all children and youth), selectively (to children and youth at risk) or as targeted interventions that tend to focus on children or youth who are already displaying signs of mental health problems or who have been diagnosed with mild to moderate mental illness (Higgins and O’Sullivan, 2015; Stockings et al., 2015). SEL involves implementing practices and policies that help students and adults acquire and apply explicit knowledge, skills and attitudes that enhance personal development, social relationships, ethical behavior and effective, productive work (Elias et al., 2015; Greenberg et al., 2003) that are related to enhanced social-emotional well-being, better conflict resolution, reduced substance abuse (CASEL, 2013) and overall mental health and well-being (Humphrey et al., 2013). In addition, a recent meta-analytic study of more than 82 school-based universal intervention evaluations revealed that these positive student outcomes could be sustained over time, supporting the long-term effectiveness of SEL interventions through adult years (Taylor et al., 2017). For those adults with mental health issues transitioning into post-secondary education, SEL fosters internal groundedness, develop strengths and assets that promote their social and emotional well-being.

Context of the study
A feasibility research conducted at George Brown College (GBC) found that CRT can readily be integrated within a supported education setting (Kidd et al., 2012). The students who received CRT found it helpful in improving their concentration and memory. They reported that they practiced and learned strategies that ameliorated the cognitive symptoms of their psychosis and their executive functioning. These findings provided impetus for a randomized control trial (RCT) at GBC in order to examine the effectiveness of a CRT intervention integrated within a supported education curriculum for individuals with psychosis (Kidd et al., 2014). In contrast to the previous work that examined cognitive remediation therapy and SEL
remediation paired with supported employment (e.g. Hodge et al., 2010; McGurk et al., 2009, 2007) where both treatment and control groups demonstrated improvements in cognitive functioning, there was no evidence in the Kidd et al. (2014) study that cognitive remediation facilitated further functional improvements. This observation was sustained at the four-month follow-up assessment, which suggested that the improved cognitive outcomes observed in the Kidd et al. (2012) pilot study were likely due to participation in an intensive supported education program rather than cognitive remediation alone. In other words, while CRT integrated within a supported education setting demonstrated enhanced outcomes in some areas of functioning and mental health, impacts on cognitive functioning alone were much less clear.

Based on the qualitative reports from the participants on the values of CRT in the pilot and the RCT, a course (Strengthening Memory, Concentration and Learning, PREP 1033) was designed and offered as an elective within the supported education program that was made available to all students, irrespective of their diagnosis. It was designed to offer these students (who typically have a complex history of mental health issues, substance use and cognitive impairment) with the tools and strategies that support recovery and lead to improved quality of life. More specifically, the program targeted skills known to be prerequisites of academic and professional success such prioritizing, multi-tasking, maintaining attention for prolonged periods of time and remembering material presented in a wide range of formats. This was done in conjunction with principles of mindfulness-based cognitive therapy (MBCT). Attention was also paid to boosting students’ self-esteem by creating awareness of their strengths and providing them knowledge of resources they may be able access to overcome the challenges. Thus, the course used: MBCT principles that fosters social-emotional competencies; computer assisted technologies; classroom discussions on strategies to enhance memory, focus, concentration, retention, attention and thinking; bridging activities to allow transferability and application of these to other life and school situations; and metacognitive training.

The paper aims to answer the overarching research question:

RQ1. What impact does CRT course within a supported education program have on the participants’ self-esteem, academic performance and/or personal goals?

Methods

Setting

The study took place in Toronto, Ontario, Canada in the “Transitions to Post-Secondary Education (TPE)” program which is a supported education program at GBC for people 19 years and older, who are facing challenges with mental health and/or substance use issues. This program is situated within a mainstream college setting. Please note that within the Canadian context the term “college” (as opposed to “university”) refers to a post-secondary program with a greater emphasis on training for skilled trades and professions such as Chef, Social Service Worker and Dental Hygienist. TPE program provides students with the opportunity to assess and improve their academic skills to facilitate entry into employment and non-supported training and other educational settings. Students enroll in credit courses such as College English, Computer Skills and Speaking with Confidence, Strategies for Student Success, Computer Technology and Psychology of Human Relations. These courses can lead to eligibility and/or exemptions in other post-secondary programs depending on the grades achieved. Other non-credit courses include Foundational Skills in English. Students take six to seven mandatory courses per semester along with the electives they might choose. This is a three-semester program and the students receive a certificate on completing the program. The course that is the focus of the research was offered as an elective to the students within this program.
**Participants**

In total, 21 participants enrolled in the course Strengthening Memory, Concentration and Learning (PREP 1033 at GBC) consented for their data to be included in the research. The data of students who completed all the data collection procedures (pre- and post-assessments; see below) were only included in the study. The participants ranged in age from 19 years to 59 years ($M = 40.66$). They included 16 women and 5 men. In total, 11 participants had schizophrenia and other co-occurring conditions; 10 participants had a diagnosis of depression, anxiety, PTSD, ED and substance use disorder. Most participants had more than one diagnosis.

**CRT protocol and data collection procedures**

On the first day of class, students were informed of the purpose of the research, sequence and format of the data collection procedures in the course (PREP 1033). They were reassured that the participation in the project was voluntary, and they were under no obligation to partake in the project. They were also informed that the participation in data collection stage of the research will not exclude them from taking the course or their course grades. So, the consent process occurred in two phases – in Phase 1, consent was received from the participants to gather the data in the class at the beginning of the course. In Phase 2, the consent was received from the participants who had consented in Phase 1 to participate in the research after the semester had ended and the participants had received their grades. The data collected during the course were secured with codes and were in compliance with all the ethical guidelines. Pseudonyms were used to code and report data; all identifying information was removed. The research was approved by the Research Ethics Board at GBC.

The project components for the course proceeded in the following chronological order.

**Pre-training assessment.** At the beginning of the course, we collected baseline data on the cognitive abilities of the students using the services and expertise of SBT Pro (HappyNeurons), a software used in CRT intervention with proven efficiency (e.g. Croisile et al., 2008). The software designers chose eight exercises that were not used in the training protocol to avoid a learning effect from the training. They chose difficulty settings that were challenging enough to avoid a ceiling effect on the performance. They created two sets of data for each exercise so that the data were different between the pre-training and post-training assessments, but had the same difficulty level.

Students also completed the Rosenberg (1965) Self-Esteem Scale. This ten-item scale measures global self-worth by measuring both positive and negative feelings about the self, using a four-point Likert scale ranging from strongly disagree (value 1) to strongly agree (value 4).

**Training.** The CRT protocol also included six essential components that were integrated and implemented within the course structure.

Mindfulness-based cognitive therapy (MBCT). The theoretical premise of MBCT is that the development of mindfulness skills leads to non-judgmental and non-reactive acceptance of all experiences, which, in turn, results in positive psychological outcomes (e.g. Segal et al., 2002). Holzel et al. (2011) explained that MBCT is based on four mechanisms: attention regulation, body awareness, emotion regulation and change in perspective on a “static” self. Mindfulness-based programs have been found to be successful in reducing behavioral problems (e.g. anxiety and depression), as well as increasing cognitive performance and prosocial psychosocial attributes (e.g. emotional regulation, social-emotional competence and coping) (Zenner et al., 2014; Langer et al., 2015). This theoretical premise is also very closely related to SEL, a concept that tends to foster core social and emotional competencies, such as self-awareness, self-regulation, initiating and maintaining healthy relationships, and
treating others with respect and care. Mastering SEL competencies results in a shift from being predominantly controlled by external factors to acting increasingly in accord with one’s internalized beliefs and values, caring and concern for others, making good decisions and taking responsibility for one’s choices and behaviors (Bear and Watkins, 2006, p. 406).

MBCT and SEL elements were sequenced, actively interwoven with the didactic, practice and evaluative components of the course. The facilitator promoted explicit awareness and focused on mindfulness by building on stories and experiences voluntarily shared by the participants. Specifically, she facilitated discussions of these experiences in a non-judgmental manner that allowed participants to appreciate individual histories from different (but always compassionate) angles. The facilitator did not “analyze” the experiences. Nor did she try to “fix things.”

Computerized drills. These drills were delivered by HappyNeuron Pro, an online cognitive stimulation software that offers tasks designed to stimulate nine different areas of cognition, namely, executive functions, verbal memory, visual memory, verbal and visual memory, spatial memory, visual and spatial abilities, visual attention, processing speed and auditory abilities. The software has been used in previous research as a cognitive stimulation tool with different populations (e.g. Foroughi et al., 2016; Tarpin-Bernard and Croisile, 2012) as it simplifies access to standardized tasks in an interactive non-monotonous environment. For this research, each student had a personal account with private login and password that they could access from outside the classroom via internet. Technical assistance and feedback/support was made available to the students during and after class time. Table I presents a description of the games, and the cognitive modules under which they were classified in the software.

Strategic monitoring. Students were encouraged to monitor and consciously think about the strategies they used and to build a repertoire of diverse cognitive strategies they could use to solve demanding tasks. This component was essential to discuss compensatory or adaptation strategies. Peer-discussions following each game allowed for sharing of knowledge and peer expertise, eventually leading to the co-construction of a classroom capital of strategies and knowledge base.

Reflective journals. Students completed a reflective journal each week on the strategies they used in each practice session either in-class exercises or outside the class. They were also tasked to monitor their behavior through Automatic Thought Record chart, in which they explained their approach to problem-solving tasks related to school and life. Students were encouraged to try out different ways of doing the task rather than focusing on being accurate so as to build their strategy repertoire.

Bridging activities. Computerized drills, even when customized and interactive, are ultimately de-contextualized and may not facilitate gains until transferred to real life situations. Therefore, “Bridging activities” were included in the course structure to facilitate transfer of gains to new cognitive tasks and problem-solving situations. For instances, students were given a template to help them organize their note-taking while watching a videotaped lecture. In another instance, they were asked to write topic sentences to complete a text passage. All these are academic skills that are often taken for granted in college students but may not be readily available to students with a complex schooling history and barriers.

Homework drills. Learning and retention are more likely to occur with consistent, spaced practice and repetition. Students were asked to complete computer or paper-pencil tasks at home on two of the days other than the day of the class for a total of at least three times a week including the class for about 45–50 min each. Some of the examples of the paper-pencil activities included overlapping figures, where the goal was strategy development and implementation, attention to detail, self-monitoring and error correction. Some of the activities in this category included counting number of overlapping circles and determining
the strategy, identifying the different objects from piles of objects and counting them and determining the strategy.

Post-training assessment. On week 14 of the course, students who consented for data collection completed the post-training assessment. All the data were exported by SBT for analysis and interpretation. Students also completed the Rosenberg (1965) Self-Esteem Scale.

Focus groups and interviews. At the end of the term and after students received their grades, they were invited to participate in a focus group or individual (semi-structured) interviews about their experiences with the course. Phase 2 consent process was completed. The participation in this phase was again voluntary and informed. There were three focus groups of 90 min duration each with six to seven participants. All the focus groups had different participants and all the sessions were recorded and transcribed verbatim. Every participant was allowed an opportunity to express their opinion on each question. The focus group/individual interview guide included questions pertaining to their experiences with the course, delivery of the course, their assessment of the content, process and relevance of the course in their life inside and outside the school. They were also asked about how they felt about themselves personally since they took the course.

| Cognitive module       | Definition of cognitive module                                                                 | Game               | Description of the game                                                                 
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Executive function</td>
<td>The module includes language-based and visual tasks to train executive functions such as reasoning (i.e. making deductions from hypotheses) and using cognitive strategies</td>
<td>Right count</td>
<td>Sorting numbers in ascending/descending order in a grid</td>
</tr>
<tr>
<td>Visual memory</td>
<td>The module uses abstract symbols and exotic characters to train visual memory</td>
<td>Shape and colors</td>
<td>Memorizing shapes and their colors</td>
</tr>
<tr>
<td>Verbal and visual memory</td>
<td>The module uses prompts that simultaneously train verbal and visual memory</td>
<td>Around the world</td>
<td>Memorizing the tour destinations for different places around the world</td>
</tr>
<tr>
<td>Spatial memory</td>
<td>The module trains spatial memory by encouraging recalling of locations through grouping and patterning strategies</td>
<td>Chinking</td>
<td>Memorizing groups of figures on a grid</td>
</tr>
<tr>
<td>Visual and spatial memory</td>
<td>The module trains visual and spatial memory through exercises that solicit the use of visual mental imagery and more particularly mental rotation in a 3D space</td>
<td>Point of view</td>
<td>Matching a point of view with the corresponding view</td>
</tr>
<tr>
<td>Visual spatial</td>
<td>The module trains visual spatial memory by creating a mental image of an object, rotating the object mentally until a comparison can be made, making the comparison and deciding if the objects are the same or not and reporting the decision</td>
<td>Sleight of hands</td>
<td>Determining if the hand shown is a left hand or a right hand</td>
</tr>
<tr>
<td>Visual attention</td>
<td>The module trains visual attention as students try to pinpoint relevant information, visually scan details and stay focused on spotting differences</td>
<td>Ancient writing</td>
<td>Comparing series of characters</td>
</tr>
<tr>
<td>Attention</td>
<td>This module trains in attention as students pay attention to a trail made up of stones that lights up at random. Students must memorize the path it creates</td>
<td>Find your way</td>
<td>Memorizing a series of steps</td>
</tr>
<tr>
<td>Processing speed</td>
<td>This module includes activities that require a rapid response. It also helps improve user attention span as it encourages users to maintain performance and vigilance over a long period of time</td>
<td>Under pressure</td>
<td>Determine whether stimuli shown successively are above or below each other</td>
</tr>
<tr>
<td>Auditory memory</td>
<td>This module trains in language and memory skills as students memorize 25 words in a grid and try to recognize them in longer lists with distractors</td>
<td>Elephant memory</td>
<td>Word recognition and memory</td>
</tr>
</tbody>
</table>

Table I. List and description of the games used in the training phase
**Data analysis procedures**

We compared the pre- and post-training scores of the participants developed by SBT Pro software company. Computerized games and the RSES were analyzed using paired sample *t*-tests to determine the significance of any change. The effect size was determined with Cohen’s *d* (Cohen, 1988).

The focus groups/individual interviews were analyzed for recurrent themes related to the students’ experience of the course and its impact on aspects of their lives. Themes were coded using the qualitative data analysis software Nvivo (QSR International Pty Ltd., 2010).

**Results**

*Performance on computerized games and RSES*

We compared the students’ performance on the computerized games at the pre- and post-training stages. We noted significant improvements on two games. In the Right count (executive function), there was a statistically significant improvement in mean accuracy 10.95 percent (raw difference) at (95% CI [2.20, 19.71]), and a median of 11 percent with SD of 19.23 percent. In the Sleight of hands (visual and spatial memory) game, there was a statistically significant improvement both with respect to accuracy and average response time in the post-training. Findings show a mean increase in accuracy of 13.33 percent (raw difference) at (95% CI [3.22, 23.44]), and a median of 20 percent with SD of 22.21 percent.

On the other hand, there was a statistically significant decrease of 14.75 in the average scores on the Chunking (spatial memory) game (95% CI [−25.73, −3.77]), with a median of 10.25 and SD = 24.13. There were no significant differences on all the other games.

Results in Table II, using dependent sample *t*-test on a sample of 21 participants showed improvements in self-esteem scores post CRT training (*M* = 18.57, *SD* = 3.94) than in pre CRT training self-esteem scores (*M* = 12.38, *SD* = 2.74). Of the 21 participants, 19 showed improved self-esteem scores after 14 weeks, 1 participant’s self-esteem score showed a decline and 1 participant’s score remained unchanged. The maximum score decrease was by 1, while the maximum score increase was by 15. The results suggest that after 14 weeks there was statistically significant improvement in self-esteem scores for the participants. A repeated measures *t*-test found this difference to be significant, *t*(20) = 7.43, *p* < 0.001 with the large effect size as measured by Cohen’s *d* = 1.82. Based on the findings, we can conclude that there was a statistically significant improvement in the self-esteem scores for the participants following the CRT protocol. On average, post CR training scores were 6.19 points higher than pre CR training scores (95% CI [4.45, 7.92]).

*Participants’ assessment of the course*

Analysis of the interview and focus group data revealed the participants’ perception of the value and affordances of the course but also the challenges and shortcomings they noted during the 14 week term. These perceptions did not always reflect or match the quantitative

<table>
<thead>
<tr>
<th>Pair</th>
<th>SE Post–SE Pre</th>
<th><em>t</em></th>
<th><em>d</em></th>
<th>Sig. (two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1: SE Post–SE Pre</td>
<td>6.19</td>
<td>21</td>
<td>3.81</td>
<td>0.832</td>
</tr>
<tr>
<td>SE – Pre</td>
<td>12.38</td>
<td>21</td>
<td>2.74</td>
<td>0.599</td>
</tr>
<tr>
<td>SE – Post</td>
<td>18.57</td>
<td>21</td>
<td>3.94</td>
<td>0.861</td>
</tr>
</tbody>
</table>

**Notes:** *t* is 7.43 significant at *p* < 0.001. *Cohen (1988) d, 0.2 is small effect, 0.5 is medium effect, 0.8 is large effect
data reported above but they did align with many of the SEL core competencies that were promoted through the implementation of MBCT component of CRT protocol.

*Awareness and perceived improvements in self.* The participants reported improvements in their perceptions of their cognitive abilities and their emotional reactions. They were aware of a boost to their self-esteem. These aligned with the SEL core competencies of self-awareness (where they recognized their strengths, limitations, were aware of the area of opportunities for themselves, had a well-grounded sense of confidence, hope for the future, and demonstrated a “growth mindset”), self-management, social awareness and relational skills. For instance, one student noted an improvement in his memory:

My long term memory has never been good […] but, now I’m able to actually take in these things that are helpful, useful, that is making my perceptions of self a lot better, my memory […] stick with me. (P1)

P1 was aware of his memory-related issues in the past. He understood the role of conscious awareness and deliberate attention in improving memory. This statement reflected and was validated by several other students who reported that they developed their personalized coping strategies to deal with memory and other cognitive issues including using agendas, mobile apps, etc. Some students indicated that they had started making content “cue-card,” using mind mapping, planning things well ahead and having an action plan to scaffold their memory.

The participants discussed how relevant the knowledge of one’s strengths is, especially in light of over-critical perceptions of self, due to past experiences. They also credited the course and the facilitator in helping them recognize their strengths and becoming more kind with regard to their challenges and seeing them as opportunities. P1 also stated that:

The teacher was also very compassionate and accepting of our challenges. I used to get help from her outside the classroom and she never asked me to come later if she was not in a meeting. And now, I am okay with myself.

P2 attributed his continued academic success in post-secondary education program and his hope for the future to the PREP 1033 course. He stated that:

I have become aware and feel more in control of my cognitive processes that used to frustrate me in the past, I now know how to redirect my natural impulses and the range of problem behaviors I used like […][…] I am now able to cope with my challenges/weaknesses by reframing, looking at other perspectives by asking what will I tell my best friend. This has given me a pause and more control on my behaviors. (P2)

This is reflective of the development of SEL core competency of self-management (ability to successfully regulate one’s emotions, thoughts and behaviors in different situations – effectively managing stress, controlling impulses and motivating oneself). P2’s quote below aligns with the core competencies outlined in SEL social awareness (ability to understand social norms for behavior and to recognize supports), relationship skills (ability to communicate clearly, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively and seek and offer help when needed) and responsible decision making (ability to make constructive choices about personal life and career choices based on realistic evaluation and a consideration of my well-being):

I used to hesitate and feel out of place in social situations. I thought, I have nothing of value to add. I was reluctant in any interactions in the classroom earlier, but now I have more awareness about myself that has made me feel more confident and less fearful to ask for help […] and know how I participate and what other people might think about me […] If I hadn’t done all of the stuff in this course, I wouldn’t have gone to Seneca College. I have been there for 7 weeks now, and I am doing well. I probably wouldn’t have been there at all anymore if I had not learnt some of things about myself here. The huge benefit of this class was that it taught me a lot about my own processes and how to improve them and make up for my weaknesses. (P2)
P3 perceived his achievement in the PREP 1033 course as a source of power. The emphatic reference to the self “it’s me who has the power” clearly denotes a high sense of agency and self-esteem. He stated:

Just knowing that we have the capacity to change, to have control of whatever’s going on […] knowing that it’s overall me who has the power and who can change my thinking. (P3)

Another positive aspect of PREP 1033 was related to the therapeutic effect it had on some of the students. As noted above, CRT and MBCT do not address the feelings but allow for thoughts to be reframed and behaviors to be changed so as to facilitate a change in feelings. It also provided students with the language and the tools to make meaning of their experiences in a safe space and in their own time (course created conducive conditions for the fostering self-awareness and provided safety to explore relationship skills). P4 saw the value of this intervention in promoting self-worth. Her perception of the PREP 1033 as an alternative to medication or substance use is quite powerful. She reflected:

To me it was like free counselling, because that’s three hours of info that can benefit me and my life. Focusing on positive things, like what cognitive thinking can do for one, because if an addict or someone with mental health issues hears anything positive that can change especially they can change it without medication or their drug of choice, that’s always good. (P4)

P4’s comment also alluded to this approach of the course as being reflective of the SEL core competencies of self-awareness and social awareness:

I struggled in school due to years of substance use issues, I could not remember anything, and I could not focus on anything. I still have the same challenges but now I understand that I am not stupid, I have become more understanding of my own struggles and know that it is my years of substance use and its impact on my brain and body. This is the third time I am attempting this program and I have left 2 times prior to this. But, now I access disability office for my tests, have a note taker to help me with school work, just because I am not focusing on what I can’t do but my focus is what I can do now. (P4)

Participants also seemed aware of the transferability of the knowledge and skills they had acquired in PREP 1033. In the following quotation from P5, this awareness is augmented by a firm agentive stance to make use of this knowledge to improve her work with youth in the future:

This is something that I want to bring in when I work with youth which is my long term goal. (P5)

Overall, interview responses indicate that the participants perceived PREP 1033 as a valuable course that needs to be included in the education system. They also recommended that the course status should change from an elective to a mandatory course. They stated that the content of this course allowed for a space for students to explicitly discuss and address the many cognitive barriers they experience as a result of mental health issues, substance use issues, the effects of interrupted schooling, their potential success in school that is heavily dependent on cognitive skills. They even suggested that there should be provision to access this course by students from different fields such as commerce, business and nursing. However, there was a disagreement on the best time to introduce such a course. P6 suggested that PREP 1033 should be a first-year course, while P7 advocated for delaying it to the third semester:

I think […] it should be something that is mandatory and taught in the first semester because […]. It does prepare you and it gives you a better idea of how you learn and what you have to do to be successful. (P6)

In third semester, you’re getting the more dedicated students and also in semester three you’re getting the ones who are going to put more effort, who are showing up. (P7)
Awareness of challenges and frustrations. Besides the general positive feel-good impression of the participants expressed in the interviews and focus groups, there were also palpable frustrations with some aspects of the course. The participants felt empowered to express their concerns during the course and when it ended. These airing of frustrations and challenges might in fact explain the lack of improvement as shown in the quantitative findings above.

Some of the participants’ critiques related to the content, organization and assessment procedures of PREP 1033. P8 noted that classes tended to be long and dense. He suggested that the language and complex terminologies in the content were difficult and could be tailored to the needs of the participants who had a history of interrupted schooling, literacy issues, substance use and alternative lifestyles. Even though the course included modules on concentration strategies, it was hard to maintain attention for the full length of the class that did not appeal to P8 or P9:

It was good and it was fun with the computer part [...], humor helps [...], not so educational because of the fact that again these are the people who have been out of school for so long and the lifestyle that we have, and I'm finding it hard right now even to this day, just listening to something so educational for that length of time. I lose my train of thought. (P8)

P9 echoed the same concern about the density of the classroom language, and the use of highly specialized terminology (e.g. to explain brain functioning, psychological processes). She suggested using a simpler and accessible language to explain some technical terms:

A certain amount [of technical jargon] I think is good, I think just at some point you will lose people if it’s too much. (P9)

The 3 h long class sessions were too long for some students. While they recognized that it is typical of college schedules, they believed that shorter classes and lighter content would be easier to follow and learn. Though, they liked the videos shown in the class, some of them found the computerized drills frustrating at times.

Regarding the assessment system participants had different opinions and some tensions were apparent. One participant (P10) stated:

I found the lectures very helpful and the exercises were good. There was only one group assignment, but I don’t think any group work is necessary. This was a much more personal course. For her, group work did not fit into her conceptualization of the course design and purpose. On the other hand, some other participants preferred more group work to alleviate the competition they experienced, especially when they were doing the computerized activities. The computerized games, one of the essential elements of the course, were appreciated and enjoyed by most students. HappyNeurons games were designed to be interactive and personalized to match the level to each individual participant. However, since they were completed within the classroom context, it made some participants very competitive and others’ vulnerable and sensitive to the growing competition between classmates. P 11 expressed:

[...] that was hard on my self-esteem. I wouldn’t suggest sitting beside somebody who’s competitive and really good at that, because it can wreck somebody.

Some participants expressed misunderstanding about the purpose and requirements of the weekly reflections. These reflections were supposed to encourage conscious awareness for developing strategies and monitoring the thought process. A directive approach to reflection is a critical component of the learning experience for transformation and to elicit deeper thinking (Coulson and Harvey, 2013) that facilitates bridging to real life situations. However, some students did not follow the assignment guidelines, and instead of reflecting...
on their strategies after each session or each week, they procrastinated and completed all the reflections at the end of the semester to obtain a grade. The focus in this case was not learning but submitting written work in time to avoid penalization and get a decent grade. This misunderstanding of the assignment and lack of self-regulation and discipline resulted in simplistic reflections, which, in turn, failed to support or promote any learning:

To me it was like if you were writing down your reflection while you were in the class, it was fine. If you wrote down two three days later you have no idea, now it was just like an assignment and meant nothing. (P12)

There were also some concern about some technical aspects of the software such as the accent and the quality of the audio. However, there was consensus among the participants that scheduling the games after the instructor-led tutorial helped contextualize the information presented. Many of the quotes from the students above exhibit the SEL core competencies including that of self-awareness (they demonstrated self-perception, recognized strengths and showed self-confidence including being very critical), social awareness (they were able take perspective about their own issues as well as that of others”) and responsible decision making (they reflected realistic evaluation of the consequences, consideration for the well-being of oneself and others, analyzed and evaluated situations and were thoughtful in talking about the research process and their experiences).

Discussion
The CRT intervention outlined above yielded mixed results. We noted significant gains in self-esteem and on few cognitive domains evidenced by improved performance on two games. However, we also noted limited or no progress on other cognitive measures and several concerns were raised by the participants. There is some support for our insignificant findings by Wykes and Cella (2015), who indicated that participants with higher self-esteem tend to use fewer strategies that may dampen the effects of the CRT intervention and may present as a potential barrier to therapy-related improvements. However, the positive results were corroborated by some of the comments from the participants in the interviews and focus groups. The participants reflected on their improved social-emotional skills such as increased self-awareness, greater emotional regulation and self-control, identified their strengths, agency and felt empowered as a result of being part of the cognitive remediation course. Self-related cognitive processes have been extensively linked to metacognition and considered important in influencing psychotic symptom development and their maintenance. These domain areas also align with the values of SEL competencies in school settings and are an essential part of education for all students and can result in positive mental health outcomes (Durlak et al., 2011). Research evidence shows that the gains in SEL competencies influence mental health outcomes (Humphrey et al., 2013). In fact, metacognition, “thinking about thinking” (Flavell, 1979), is implicated in a large number of higher level mental functions including self-reflection, introspection and behavior implementation. Problems in this sphere can affect people’s ability to make sense of their illness experience and can compromise the integrity of their personal goals (Lysaker and Dimaggio, 2014), result in poor illness outcomes (Frith, 2004). On the other side, positive changes in this function are associated with clinical improvement of symptoms (Corcoran and Frith, 2003). Unfortunately, research shows that problems in these cognitive functions are cardinal features of a number of severe mental health conditions (Bateman et al., 2007; Liotti and Gilbert, 2011). Thus, incorporating mindfulness-based cognitive skills that promote SEL competencies in any CRT protocol has great benefits for people with mental health conditions.

In this course, the facilitator role modeled and practiced skills being taught, fostered a socially supportive instructional strategy, that was flexible, and student-centered, where
participants’ felt safe to bring their whole self that allowed them to engage and connect with others’ in meaningful ways about their perceived challenges without feeling vulnerable, express themselves without being penalized, and be able to dissent without being silenced (Quartaro et al., 2009). This created conditions to establish and maintain relationships with diverse others in the group, including the ability to communicate, listen and be listened, cooperate but be able to resist inappropriate social pressure to be competitive, negotiate and resolve conflict constructively, and feel comfortable to seek help when needed. Thus, both the content and the process of this course allowed participants to acquire the skills that are at the core of the implementation of principles of SEL and allowed them to focus on their future academic goals. There is also some evidence that suggests that the potential benefits of SEL programs may be greater for high risk populations (Weare and Nind, 2011).

The mixed findings of this study are not in line with those of previous studies (Buonocore et al., 2018). However, they are supported by the research conducted in the supported education program at GBC (Kidd et al., 2014). It seems in fact that a number of limitations and shortcomings have affected the design and implementation of the CRT as delivered by the PREP 1033 course. One of these limitations concerns the use of computer-assisted cognitive remediation (CARC) in the form of the HappyNeuron software. CARC has been used with promising results in many studies to assist with the drill-and-practice aspect of the therapy. Garrido et al. (2013), for instance, compared the effect of CARC on the neuropsychological measures and secondary outcomes (quality of life and self-esteem) of patients diagnosed with schizophrenia. The findings showed an improvement in speed of processing, working memory and problem-solving as well as significant improvement in quality of life and self-esteem in patients who underwent CARC. The HappyNeuron was also used successfully in many other studies. In the case of PREP 1033, it seems that the implementation of the course in a large group setting and the absence of customized individual supports interfered with the potential of the software. Some participants were also extremely sensitive to the growing competitiveness in the class. They believed this to be like any other computer game where winning from the other became more important. Comparison of scores between participants (who started at different baselines and had different aptitudes and strengths) led to feelings of inadequacy and embarrassment and consequently to lowered engagement. Therefore, it is imperative for CRT facilitators, in future studies: to understand and monitor the potential impact of the class dynamics and activity settings during the intervention, and/or provide adequate one on one support at all times to the participants to customize their progress; to account for and work on synchronizing students’ beliefs regarding their personal objectives and those of the course. In PREP 1033, instructor included advance organizers, reminders of course plans and task goals; however, it seems that the students needed more guidance to grasp the purpose of each task and how it relates to the overall goals of the course. Besides, the inclusion of individuals who survived different mental health conditions and experienced different forms of trauma and marginalization may have complicated the class dynamics and the class’s response to the intervention. In fact, most previous studies have recruited homogenous participant populations, with predictable patterns of behaviors and psychotic symptoms, which, in turn, may explain the more uniform patterns of findings in those studies.

In this regard, our recruitment of participant, in general, was broader and less defined than most other studies. This study was also designed in a naturalistic environment (i.e. an actual course, open to all the students as an elective) and not a typical controlled research site, where other extraneous variables (e.g. skill level, familiarity and comfort with using computers, level of highest degree obtained before interrupting schooling) are strictly controlled or participants are randomly assigned to the interventions.
Implications
This research provides important insights about implementing CRT protocol alongside mainstream curricula within educational setting that incorporates mindfulness-based training, structured reflections and activities to bridge the gains made to school and other real life situations. This research found significant improvements in participants’ self-esteem and its alignments with the core competencies of SEL. The research also highlights the critical role educator’s play within the educational institutions as a result of their strategic position to destigmatize the challenges students face within their cognitive domains that can ensure their academic success and their identity. This research also raises important questions about the value and relevance of using any computer based training in supporting cognitive remediation interventions. Major insights gained through this research will hopefully spawn both academic and practitioner interest in further refining and elaborating on the framework with various protocol components, including using empirical research in this important area. Further research is needed to determine the benefit of this training using mindfulness-based cognitive behavioral skills and its importance in facilitating the development of SEL core competencies for specific populations, determine other forms of training, frequency and method of delivery that would be most beneficial, effective and sustainable.

Conclusion
Despite the mixed results and the few limitations associated with the CRT intervention protocol reported above, we believe that the procedures and theoretical underpinnings of the intervention remain valid. The students’ experiences explored above serve as reminders of the complexity of cognitive remediation and of the SEL factors associated with it. For instance, in this research, we did not specifically address students’ self-esteem but noted the positive improvement in self-esteem as a result of the open and sensitive acknowledgment of cognitive impairments, modeling and co-construction of a repertoire of strategies to improve cognitive deficits and the building of a community of supportive agents who had similar challenges. These findings have strong underpinnings and support within the SEL literature.

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Taras Gula is Professor of Mathematics at George Brown College. He provided support with analyzing the quantitative data.
Study abroad as social and emotional learning
Framing international teaching with critical cosmopolitan theory

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Abstract
Purpose – This paper investigates and reports on the study abroad experiences of 22 teacher candidates from the Southeast region of the USA (n = 22). The purpose of this paper is to examine the teacher candidates’ development of social and emotional learning through their international teaching experiences.

Design/methodology/approach – The study is framed by Critical Cosmopolitan Theory, which is a theoretical lens for a critical understanding of the development of global competencies for critical consciousness. The paper uses a case study research design (Yin, 2008), which included data collected via artifact analysis, participant interviews and participant observation through field notes.

Findings – The study found how the study abroad and international teaching experiences were instrumental in aiding in the teacher candidates’ social and emotional learning. This included the adoption of culturally responsive teaching practices, development of reading the world and enactment of taking action to rewrite the world.

Research limitations/implications – One of the limitations is the relatively small sample size. This is due, in part, to the high cost associated with study abroad. The high cost of study abroad can be a barrier for students to access the cross-cultural experiences afforded by study abroad. The hefty price tag of study abroad often limits the number of teacher candidates at public institutions who can go on study abroad (Malewski and Phillion, 2009). A future research agenda is needed about ways to help offset the costs in order to make study abroad more affordable and equitable.

Practical implications – The practical implications of this paper are that it provides an instructive lens for how to integrate social and emotional learning within a study abroad experience. At the same time, the paper connects socio-emotional learning (SEL) with the development of global competencies and global citizenship.

Social implications – The social implications relate to the practical implications in that the paper illustrates how SEL is connected to the development of global citizenship development. The study wed the critical cosmopolitan framework with SEL to show how learners develop empathy through reading and rewriting the world.

Originality/value – The case study presented in this paper highlights the possibilities of study abroad in tandem with international teaching experiences to help prepare teachers with SEL features like fostering empathy, developing culturally responsive practices, and becoming critically conscious and cosmopolitan.

The study fills a gap in the literature regarding the development of SEL among elementary education teacher candidates through study abroad and international teaching experiences.

Keywords Critical cosmopolitan theory, Global citizenship, Global competencies, International teaching experiences, Social and emotional learning (SEL), Study abroad

Paper type Research paper

The purpose of this Special Issue of the Journal of Research in Innovative Teaching & Learning is to examine the intersectionality and interdisciplinary contours of socio-emotional learning (SEL). This paper argues that educating globally competent educators can be aided with an SEL lens. Teacher education programs have a responsibility to prepare teachers today to meet
the demands of tomorrow’s future. A SEL lens helps to situate those demands in the awareness and management of emotions and relationships. Indeed, such relational awareness is a key to acquiring life skills to navigate an increasingly interdependent global village. As the Kiswahili proverb states, “It takes a whole village to raise a child”; the SEL framework helps the village to nurture and guide the child. In this paper, I assert that SEL provides a particularly empowering frame for the support and development of global citizenship. Furthermore, I seek to wed SEL with a global citizenship theory called critical cosmopolitan theory (CCT). I illustrate this union by examining a case study of a study abroad program for 22 teacher candidates \((n = 22)\) from a large research university in the southeast region of the USA. The case study focuses on the impact of international clinical teaching experiences through a study abroad program to South Africa. I use a SEL lens to report on how the teacher candidates construct meanings and purposes for global and intercultural competencies as part of this study abroad experience.

SEL is the recognition of emotions and the development of empathy in order to make informed and responsible decisions (Jennings and Greenberg, 2009). SEL includes three components: emotional processes, which is when a person is able to recognize and regulate emotions; social and interpersonal skills, which is when a person can recognize social cues and act with pro-social behaviors; and cognitive regulation, which is when a person is able to adapt to new situations and regulate impulses (Jones \textit{et al.}, 2013). All of these features of SEL are critical for teacher candidates who are learning to teach as well as develop professional competencies that will guide their pedagogical practices. This development does not happen in a vacuum. Rather, diversity and pluralism comprise the training ground for teacher candidates – especially in urban areas. Teacher candidates are being prepared to be culturally responsive, globally conscious and interculturally competent (Hansen, 2015). This is especially tantamount in the USA, where over a quarter of children (25 percent) under 18 years old have a parent who was not born in the USA (Kandel, 2013). More and more, the USA’ classrooms reflect the mosaic of global diversity in terms of culture, ethnicity and religious beliefs (Goodwin, 2010). Globally competent teacher candidates are a must. Such teacher candidates need to be girded with an understanding SEL as they are nurtured with culturally sustaining pedagogies (Paris, 2012) as well as global awareness and intercultural competence (Longview Foundation, 2008).

The remaining part of the paper is organized into four sections. First, the paper grounds the study in CCT, which is a theoretical framework for the development of global competencies that lead to a deeper, critical consciousness. Second, the paper will describe the study’s case study research design. Third, the paper will report on the findings of the study. Finally, the paper will discuss the implications of the findings in connection with SEL and the development of global educators.

**Theoretical framework**

The paper is framed by CCT (Byker, 2013, 2016). CCT provides a theoretical framework for the development of global competencies, which lead to a critical consciousness of the world. As stated earlier, I discuss CCT in connection with SEL. The three features of SEL align with the need for global competent teachers. Such teachers display emotions that reflect empathy for what it means to live in a global society. They demonstrate culturally connected and responsive interpersonal skills for the students in their classrooms. These teachers are also open-minded and willing to adapt to new situations like when new students – who may or may not be fluent in the language of instruction – join their classrooms mid-year. When it comes to preparing high-quality teacher candidates, it is tempting to rank order the SEL dispositions and skills required for success in teaching. Teacher education programs have vision and mission statements that provide direction for what dispositions and skills their program emphasizes. Yet, the failure to address any
of the three SEL components is a failure to support teacher candidates in their development as social and emotional nurturers. Similarly, teacher candidates need to also be prepared for the global dimensions that define today’s classroom learning context. Such preparation connects to the realities about living in an international and global world. Global competencies are a mix of skills and dispositions to help citizens navigate international issues (Byker and Banerjee, 2016; Byker and Putman, 2019).

CCT utilizes the Asia Society’s global competency matrix as part of its framework. The Asia Society is a non-governmental organization that is dedicated to fostering global competencies. In 2011, the Asia Society published a free, electronic book called Educating for Global Competency (Mansilla and Jackson, 2011). In that book, the Asia Society defines global competency as “the capacity to understand and act on issues of global significance” (Mansilla and Jackson, 2011, p. 2). The Asia Society’s Global Competency Matrix includes the following four components: investigating the world, recognizing perspectives, communicating ideas and taking action.

CCT maps the Asia Society’s four global competencies (Mansilla and Jackson, 2011) to Paulo Freire’s (1970) notions regarding the development of conscientization or critical consciousness. CCT provides a conceptual frame for developing global citizens who are both critically conscious and humane. Global competencies should guide students and teachers toward a “critical consciousness” (Freire, 1970, p. 35) about the world. Paulo Freire, the Brazilian Educationist, focused his writing on education for critical consciousness. Education – from a Freirean perspective – involves much more than acts of learning how to read and write and compute numbers; education is about empowerment and emancipation. Freire coined the term conscientizao or critical consciousness to identify the possibilities of education to help to liberate people from societal injustices. Freire (1970) explains that the development of critical consciousness is part of being able to “read the world” and “rewrite the world”. In his seminal book, Teachers as Cultural Workers, Freire (1998) describes that being able to read the world is a creative activity that leads to deeper comprehension of one’s presence in the world. Reading the world includes having eyes opened to the world’s diversity and to global issues – like the opportunity gap and income inequality – that cause deep rifts in societies.

When eyes are opened, then Freire says that students and educators are prepared to start rewriting the world through communication and action. By rewriting the world, Freire (1994) means the engagement in social activities that can transform the world. Rewriting the world includes what Freire (1994) identifies as denunciations and annunciations. By denunciations, Freire means a critical consciousness about the globe that is aware of and denounces the world’s injustices. Annunciations encompass an awareness and announcement of all peoples’ humanity, dignity and future possibilities. Denunciations and annunciations are necessary features of rewriting the world and fostering a critical consciousness about the globe.

The main presupposition of CCT is being a global citizen requires a social and emotional learning maturation toward critical consciousness. Such maturation includes the integration of global competencies with Freirean skills like reading and rewriting the world. Cosmopolitanism is the final feature of CCT.

Cosmopolitan by its Greek root word kosmopolitês literally means citizen of the world. Becoming cosmopolitanism is more than just becoming urbane or hip, rather cosmopolitan is a virtuous word that combines empathy, hospitality and openness. Appiah (2010) asserts that cosmopolitan captures how people “take value in human lives and humanity” (p. xv). CCT seeks to develop global citizens who are humane vis-à-vis conscientization of the wider world. Figure 1 provides a graphic representation of CCT. The figure illustrates the merging of the Asia Society’s Global Competency Matrix with Paulo Freire’s perspectives on education and conscientization.
Utilizing CCT as a theoretical framework, the paper examines the following research questions:

*RQ1.* What are teacher candidates’ perceptions of how they investigated the world during their study abroad experience?

*RQ2.* What are teacher candidates’ perceptions of how they recognized perspectives during their study abroad experience?

*RQ3.* What are teacher candidates’ perceptions of how they communicated ideas during their study abroad experience?

*RQ4.* What are teacher candidates’ perceptions of their willingness to take action because of their study abroad experience?

**Method**

To investigate these research questions, the paper uses a case study research design (Yin, 2008). The case study centers on a study abroad trip in South Africa. The trip was 24 days long. Participants included 22 teaching candidates majoring in elementary education ($n = 20$) or world languages ($n = 2$) at Southmont University, which is a large state university in the southeastern region of the USA. The South Africa study abroad experience primarily took place in the Cape Town area. The participants stayed at a host university. The participants’ study abroad experience included over 40 hours of observation and teaching at four Cape Town area elementary schools. These public, elementary schools were all different in terms of their Quintile standing within the South African education system (see Spaull, 2013). The schools were Quintiles 2 and 3 public schools – which are under-resourced schools – and a Quintile 5 school, which is a high-fee, high resourced public school. The study abroad program included daily debriefs and lectures by South African professors about the South African education system and the legacy of apartheid in South African school. The study abroad program had several cultural excursions including visits to Robben Island and the District Six Museum.

**Data collection**

Data collection included artifact analysis, participant interviews and participant observation through field notes. These data allow for a “thick description” (Geertz, 1973) about the case study. For the artifact analysis, the participants kept a reflective journal of their trip. The journal included the following reflection prompts aligned with CCT:

- Global citizens are aware and curious about the world and how it works. What are ways that you investigated the world during this study abroad trip?
- Global citizens recognize that people may have different perspectives from their own. What new perspectives have you gained from this study abroad trip?
Participant interviews followed up on the themes that the participants shared in their journals. The interviews were conducted using a semi-structured interview approach (Holstein and Gubrium, 1995). The interview question protocol included questions about the overall perception of study abroad and followed up on participants’ responses in their journals.

Data analysis
Data were analyzed qualitatively using Glaser and Strauss’ (1967) constant-comparative method and took place after the study abroad experience was completed. The analysis included a three-step interpretive process (Miles and Huberman, 1994) of, first, reading through all the data from the reflective journals and interview transcripts. Next, the data were coded and organized into categories. Third, categories were analyzed to identify similarities and differences which emerged from the data to address the study’s research questions. From this analysis of similarities and differences, I developed larger themes related to the development of global competencies among the participants. I analyzed these themes into findings that help answer the research questions, which guided the study.

Findings
Four themes emerged from the data analysis. The paper introduces and discusses each theme in relationship to the study’s research questions. The themes are organized by the Asia Society’s four global competencies: investigate the world, recognize perspectives, communicate ideas and take action.

Investigate the world
Participants reported how their South Africa study abroad experience afforded opportunities to investigate the world by examining culture and the South African educational system in a clinical teaching format. In response to the question about investigating South Africa, the Southmont University teacher candidates focused on South Africa’s system of education. In particular, their emphasis was on the inequities of school resources. The teacher candidates were surprised by the scarcity of teaching materials in the South African elementary schools – mostly in Quintiles 2 and 3 – where they taught. One Southmont University teacher candidate wrote:

I have noticed a lack of resources in some of the South African elementary schools. Books that students can read their leisure, technology that students can use for learning, individual desks, and white boards or chalkboards are a few of the very limited resources available in the schools. Before this trip, I didn’t really think about not having access to resources like books and even a chalkboard in order to teach.

The Southmont University teacher candidates reflected on the respect they had for the South African elementary school teachers who make do with the few resources they can scrounge up in order to teach. One participant discussed the South African teachers’ ingenuity and provided the example of a teacher using bottle caps for counters in a math class. Another participant wrote about how a teacher snapped crayons in half so that her students all had crayons to use for coloring.

Investigating the world of the South African education system was also eye-opening for the Southmont University teacher candidates in terms of environmental education.
and conservation. The teacher candidates noticed that many of the elementary schools did not have air-conditioning and the heating system was rarely turned on. They remarked on the open windows in the classroom, which allowed in fresh air. The school children would arrive to school “layered-up” in clothes and then peel off jackets and sweaters as the day progressed. Water conservation was also an issue that the Southmont University teacher candidates noticed. Teacher candidates reflected on how they became more aware of their water usage and waste throughout their time in South Africa. They remarked on the many signs and posters that provided reminders about turning off the tap when brushing teeth, taking 90 s showers, as well as limiting the amount of toilet flushes. These reminders helped the teacher candidates “to be more mindful and vigilant about their water usage.” The Southmont University teacher candidates believed the USA had much to learn and put into practice related to environmental protection and water conservation.

**Recognize perspectives**

The issue of water conservation reflects the emphasis on environmental education, which is a different perspective than the teacher candidates may have had growing up in the USA (Byker *et al.*, 2019). The study abroad and clinical teaching experience helped the teacher candidates to develop a deeper recognition of perspectives. One of those perspectives is the difference in how religion is recognized in South Africa schools compared to the USA. Southmont University teacher candidates focused on the prevalence of religious education (RE) in the South African public schools. The Southmont University teacher candidates completed their clinical experiences at public elementary schools. The legacies of the British rule in South Africa are still reflected in the public school curricula, including RE. Many of the Southmont University teacher candidates shared how the inclusion of RE and a time for prayer in the school was new to them and made them uneasy.

For example, one teacher candidate explained, “I found that I wasn’t comfortable with the prayers during school. It seems like only one religion is catered to. I would like to find out more about why this is allowed in South African public schools.” Another teacher candidate stated, “The students have a prayer time in schools that they have to participate in. I don’t agree with this because not all religions are being catered to during this time.” The teacher candidates perceived that Christianity was only the religion being observed during this prayer time, which they believed unfair to the children who may have religious beliefs other than the Christian faith.

Another perspective that the Southmont University teacher candidates encountered was South African university students having a larger view of the world and greater knowledge about global events. One Southmont University teacher candidate shared how talking to South African university students made her realize how myopic her view of the world. She explained how her view of the world was quite limited to the USA. In fact, the first time she heard or read about apartheid was when she was preparing for the trip to South Africa. The Southmont University teacher candidates expressed the need for a larger perspective about the world and global events. One teacher candidate put it this way, “Participating in this study abroad trip has made me realize that I need to be more aware of what’s happening not only in the United States, but in countries all over the world.” At the same time, the Southmont University teacher candidates’ perspectives were broadened related to everyday realities in a context like South Africa.

One of those realities is poverty. Teacher candidates expressed a sense of shock about the extreme poverty that they encountered in South Africa, especially in the townships. One Southmont University teacher candidate explained:

> At home, I only see a couple of homeless people, but in South Africa, I walk by homeless on a daily basis. The visit to the township was eye-opening, walking through the township made me aware of what poverty looks like and how families live together in a small space with very few resources.
All the Southmont University teacher candidates agreed that the visit to the township was one of the most eye-opening experiences of their study abroad trip. The township visit was led by a local guide who grew up in the township and runs a non-profit organization teaching the children in the township computer skills and how to ride bicycles. The candidates reported that having a local guide lead them though his community helped them to move beyond “poverty tourism” to see the communal aspects, entrepreneurial spirit and ingenuity within the township.

Another reality the teacher candidates encountered was racism. The legacies of apartheid are still present within South Africa. Apartheid can be seen in the spatial organization of the Cape Town geography and in much of the divisions of labor. For example, it is more common to see a black South African as a streetcleaner than a white South African. The legacies of apartheid are present in the views of some people, including some South African university students the Southmont University students encountered. For example, one Southmont University teacher candidate recalled a conversation with a white South African student who expressed strong anti-immigrant, anti-Muslim and racist points of view. In response, the Southmont University teacher candidate was dismayed and stated, “It makes me sad that there is more ignorance across the world. Even in South Africa, which only recently worked to overcome apartheid and discriminatory systems, racist people can still live.” The recognition of perspectives is about reading the world to recognize the prevalence of ignorance and injustice.

Communicate ideas
The study abroad experiences afforded opportunities for cross-cultural communication and the recognition of the privileges that come with being speakers of English. The Southmont University teacher candidates reported being impressed that many of the elementary students were tri-lingual and knew how to speak: Afrikaans, English and isiXhosa. The teacher candidates also reported how their study abroad experience made them more aware of their own privileges especially as speakers of English. A Southmont University teacher candidate put it this way, “I think I take too much for granted. I can only speak English, but I expect to just say ‘hello’ and people will understand me. This experience has opened my eyes to all the privileges that I have in terms of language.” Another Southmont University teacher candidate shared, “I have seen how English is used as a common way to communicate in South Africa and gives me access to the things I want to buy at the store. But, it doesn’t give me full access to cultural understandings.” This quote is a reflection of how many of the Southmont University teacher candidates recognized that language is a form of communication and access. Knowing English provided an almost universal way to communicate in South Africa, but English does not always provide access to another person’s culture.

Taking action
The teacher candidates were ready to take action because of their study abroad experience and clinical teaching opportunities. For the Southmont University teacher candidates, the most popular form of taking action was adopting culturally responsive pedagogies in their future teaching practice. They also reported on how they planned to promote study abroad and international experiences. Related to culturally responsive pedagogies, Gay (2002) defines cultural responsiveness as “using cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them” (p. 107). To enact culturally responsive instruction, teacher candidates need to engage in experiences to understand young peoples and families’ cultural background.

Experiences like study abroad coupled with international teaching opportunities are often quite powerful. The Southmont University teacher candidates reported as much. One Southmont University teacher candidate shared about how the life of Nelson Mandela...
inspired her to take action as a future school teacher. She explained, “As a future teacher, I will be an advocate for my students and will also be purposeful about getting different cultures to interact in the classroom. Like Nelson Mandela, I want to be a teacher who brings people together.” Another teacher candidate shared:

During my time in South Africa, I taught many lessons on cultural awareness. I taught about the importance of knowing and respecting the culture of others. I will take these lessons back and teach them again in the US, where cultural awareness is just as important.

Teacher candidates also connected responsiveness to the idea of inclusion. The purpose of inclusion is not to single out students with disabilities but rather give them supports that can make them successful within the general education population. One teacher candidate noticed during her time in South African school a lack of resources and attention to students with special needs. She wrote, “I plan on taking action on behalf of students with special needs. I felt that many of these students were just ignored. I will promote inclusive practices to make sure that students with special needs are part of the classroom.” Whether it was the adoption of culturally responsive practices or inclusion, the Southmont University teacher candidates eyes were opened to the world and were moved to take action.

Finally, the Southmont University teacher candidates planned on taking action to promote the benefits of study abroad. The Southmont University teacher candidates explained how the study abroad opened their eyes to making a difference as future teachers. They wanted to share their experiences with the children in their future classrooms. Likewise, they planned on promoting study abroad to their peers in order to encourage them to attend a future study abroad trip. A number of the Southmont University teacher candidates explained that they utilize the South African cultural artifacts that they purchased during the study abroad trip in their future classrooms. As a group, the teacher candidates gained a deeper commitment to teaching back home. One Southmont University teacher candidate explained it this way:

I keep thinking about this quote that goes something like this: “People travel to faraway places to watch the kind of people they ignore at home.” Study abroad has taught me that I can no longer ignore the kids back home. I am excited to start my journey as a classroom teacher so I can share about the powerful experience I had during my study abroad trip to South Africa.

The Southmont University teacher candidates had a greater resolve for the global competency of taking action because of their study abroad and international clinical teaching opportunities in South Africa.

Discussion
Study abroad is recognized by American Association of the Colleges for Teacher Education as one activity for university students to gain international experience in teaching (Alfaro and Quezada, 2010). The authentic experience of study abroad is considered important for intercultural development and for providing first-hand of experience in learning about people and culture of the host country (Alfaro and Quezada, 2010; Pence and Macgillivray, 2008). Evidence demonstrates that those who have study abroad experience demonstrated increased knowledge in culture and politics, and a greater understanding about life, the traditions of the host country, and to support personal growth and independence (Alfaro and Quezada, 2010; Byker, 2014, 2016; Byker and Marquadt, 2016). Study abroad participants are also more confident to speak with strangers and figure out ways for communication in new environment (Medina et al., 2015; Pilonieta et al., 2017). The paper’s case study reflects how SEL can be supported through the development of global competencies.
According to Jones et al. (2013), SEL competencies and skills need to be embedded in the daily life of teaching and learning. They provide concrete strategies in the support of SEL, which include: building emotional awareness, the incorporation of daily reflection and the culture of continuous learning. The case study in this paper demonstrates the effectiveness of these strategies in a study abroad context. The study’s teacher candidates developed a deeper emotional – and intercultural – awareness as they encountered new experiences vis-à-vis the South African context. This deeper emotional learning was fostered by the daily reflective activities, which allowed the teacher candidates to communicate how they were making sense of their study abroad experiences. The study abroad trip also reflected a culture of continuous learning – whether through confronting ignorance or the adoption of culturally responsive pedagogies. The case study further illustrates how international teaching and clinical experiences at schools expand teacher candidates’ sense of agency – or the ability to take action – as future educators and citizens. Agency is an important feature of SEL as it reflects what the maturation of social and emotional learning.

The expansive sense of agency as global educators is an example of the many affordances of study abroad. In this current study, it was also found that study abroad was a catalyst for cosmopolitanism or making connections to humanity (Appiah, 2010). How did this happen? To address this question, we return to the study’s framework: CCT. This theory is premised on supporting the development of critically conscious global competencies, which compels citizens to act in humane ways. Within the case study, the teacher candidates move toward critical consciousness in four main ways. First, the teacher candidates investigated the socio-cultural context and educational context of South Africa. They began reading the world (Byker, 2013, 2014, 2015; Freire, 1970) of South Africa even before the study abroad trip commenced. This act of reading the world helped them to better the South African context which they be situated. Second, the teacher candidates had their eyes opened to new perspectives about cultural norms, educational pedagogies, language instruction, socio-economic status and even the legacies of racist systems like apartheid. For many teacher candidates, the recognition of difference in perspectives included broadening their thinking about classroom sizes, instructional resources and the language of instruction. Third, the teacher candidates developed a great of sense of awareness for the communication of ideas in multiple languages. They also gained greater appreciation for how multilingualism is a learning strength rather than a deficit. The teacher candidates developed a greater commitment to communicating with students and families in culturally responsive and culturally sustaining ways (Paris, 2012). Fourth, the teacher candidates developed a deeper commitment to taking action to make a difference as future educators. For some teacher candidates taking action meant promoting the value of study abroad and international teaching opportunities with their peers. For others, taking action meant sharing about their study abroad experiences in their future teaching classrooms back in the USA. As Byker (2016) explains, taking action is not about where the action is situated, but rather why a teacher candidate decides to take action. The teacher candidates in this case study were inspired to take action because their study abroad and international teaching and clinical experiences connected – and challenged – their notions of what it means to be an educator. Being an educator means that one is nurturing and helping to develop future citizens – of the world – who have a deep sense of humanity and what it means to be connected with the local community and the global community. The study abroad experience helped the teacher candidates develop SEL through exercising a deeper critical consciousness as a cosmopolitan or citizen of the world.

Limitations and future research
There are limitations related to this study. One of the limitations is the relatively small sample size. This is due, in part, to the high cost associated with study abroad. The high cost
of study abroad can be a barrier for students to access the cross-cultural and the SEL experiences afforded by study abroad. The hefty price tag of study abroad often limits the number of teacher candidates at public institutions who can go on study abroad (Malewski and Phillion, 2009). A future research agenda is needed about ways to help off-set the costs in order to make study abroad more affordable and equitable. Additionally, more research is needed in regards to the connection between SEL development and international teaching experience that may be situated in the university where the teacher education program is located. For example, teacher candidates may be able to have field experiences with teaching English classes or citizenship classes to a group of refugees. A future research agenda would expand the sample size to include study abroad participants from all teacher preparation levels – including the middle level and secondary level. The case study in this paper focused on elementary level teacher candidates.

Yet, there may be similar or divergent perspectives about SEL, study abroad and international teaching experiences among the teacher candidates preparing to teach middle school or high school. Finally, a future research agenda would include longitudinal studies of the impact of study abroad experiences on educators’ professional teaching practice. Such a study could include a long-term examination of the social and emotional learning of teacher candidates or practicing teachers who attend study abroad or participate in international teaching experiences. Is this population of educators more likely to assume leadership positions in the future? How, if in any way, is there SEL different from teachers who do not participate in study abroad? Such questions could guide a future research agenda. Likewise, longitudinal studies are needed to examine the impact of study abroad on participants’ change of perceptions – over time – of their SEL development and what it means to be a critically conscious global citizen.

Conclusion
International teaching and clinical experiences provided by study abroad are wrapped up in the possibilities of fostering social and emotional learning through the development of emotional awareness, empathy and cognitive regulation. All of these SEL features are especially critical for teacher candidates to develop. Indeed, SEL can support teacher candidates in effectively applying the knowledge, dispositions and skills necessary for teaching in diverse classrooms and for the development of global citizenship. This study demonstrates how study abroad experiences further nurture SEL skills – like empathy – and to develop global competencies through authentic learning opportunities in a context different than the USA. Whether in South Africa or another country, the case study presented in this paper highlights the possibilities of study abroad in tandem with international teaching experiences to help prepare teachers with SEL features like fostering empathy, developing culturally responsive practices, and becoming critically conscious and cosmopolitan. The study fills a gap in the literature regarding the development of SEL among elementary education teacher candidates through study abroad and international teaching experiences. In turn, the teacher candidates have committed to take action in order share their international opportunities with their future students and guide those future students in reading and rewriting the world as global citizens.

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**Further reading**

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