Positive Education

Ronnel B. King
Imelda Santos Caleon
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Positive Psychology and Positive Education in Asia

Understanding and Fostering Well-Being in Schools

Positive Education

Series Editor

Ilona Boniwell, School of Psychology, University of East London, Goupillères, France

The Positive Education book series provides a comprehensive coverage of the field of positive education, encompassing subjects such as education for well-being, personal development, resilience, emotional intelligence, flow, and character strengths. Separate volumes cover each of these subjects, offering depth and complex understanding of the subject matter, research advances in this area, as well as well-evaluated practical sugestions for promoting intended outcomes. Positive education is based on the established discipline of positive psychology, and underpinned by theories and empirical research in this field. It aims to develop the skills of well-being, flourishing and optimal functioning in children, teenagers and students, as well as parents and educational institutions. Written by researchers and scholars of positive psychology, this book series offers a range of definitive texts for academics interested in implementing, researching and evaluating positive psychology-based approaches in schools and other educational institutions.

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Positive Psychology and Positive Education in Asia

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Chapter 1
Positive Psychology and Positive Education: Asian Perspectives on Well-Being in Schools

Ronnel B. King, Imelda Santos Caleon, and Allan B. I. Bernardo

Students' academic learning and socio-emotional well-being are inextricably linked (Datu & King, 2018; Kern et al., 2015; King et al., 2016, 2022, 2023; Seligman, 2019; Seligman et al., 2009; Waters & Loton, 2019). Students with higher levels of well-being get better grades, have more adaptive motivational beliefs, engage more deeply with schoolwork, and have more positive relationships with teachers, parents, and peers (King et al., 2015, 2023; Reschly et al., 2008; Zhoc et al., 2020). Conversely, students who do well in school are also likely to enjoy higher levels of well-being as academic success builds students' sense of belonging, efficacy, and confidence (Datu & King, 2018; Datu et al., 2017; Valdez et al., 2022; Zhou et al., 2021). However, much of the mainstream education research has focused exclusively on academic success, often neglecting the importance of well-being in schools.

Positive education, which is an emerging paradigm that applies the key tenets and approaches of positive psychology in educating students, aims to address the aforementioned gaps in the literature. Positive psychology is a movement within psychology that focuses on understanding and promoting the positive aspects of human functioning (Gable & Haidt, 2005), along with the factors, processes and conditions which lead to happiness, flourishing and fulfilment (Seligman & Csikszentmihalyi, 2000).

Applied in the realm of education, the nature and function of positive psychology resonates with the principle of whole-person education, which emphasizes the need to cultivate students' skills for academic learning and well-being (Seligman et al.,

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2009). There is increasing empirical evidence suggesting that developing the skills of well-being can make a difference in the life and functioning of students and teachers (Seligman et al., 2005).

Studies focusing on positive psychology and positive education have been steadily growing but remained relatively disconnected from mainstream educational psychology and education research (Coulombe et al., 2020; Gill et al., 2021; King et al., 2016; Kristjánsson, 2012). Teaching and learning approaches that utilize the theories of and empirical findings in positive psychology have "mostly failed to register on the radar screen of educational psychologists" (Kristjánsson, 2012, p. 88). It is also noteworthy that scant attention has been devoted to understanding the role of socio-cultural contexts in positive psychology and positive education research. While majority of the world's population live in Asia, most of the published studies examining these areas have been framed in what Henrich et al. (2010) referred to as WEIRD (Western, educated, industrialized, rich, and democratic) societies, and, thus, offers culturally biased and non-representative insights (Coulombe et al., 2020).

The limited research on positive psychology and positive education involving Asian samples is especially problematic noting the substantial body of evidence indicating how cultural differences can influence learning experiences and well-being outcomes (Bernardo et al., 2021; Diener et al.,2003; Jebb et al., 2020; Kasser, 2011; King, 2016; King & McInerney, 2019; King et al. 2016; Kurman et al., 2015; Stankov, 2010; Yoo, 2020). Moreover, a few studies have shown that the correlates and antecedents of academic and well-being outcomes of Asian students may be different from those identified among Western samples (e.g., Ahn and Baek, 2013; Caleon et al., 2017; King, 2015, 2016; King & Ganotice, 2015; Liem, 2016; Low et al., 2016; Peng et al., 2020).

Studies focusing on wellbeing—which lies at the core of positive psychology and positive education—are relevant and timely given the increasing number of people experiencing mental health conditions worldwide (Duan et al., 2020). A large-scale cross-national study involving Asian and European students has reported higher levels of depression and lower levels of life satisfaction for the former compared the latter (Stankov, 2013). In Asia, it was reported that the number of people with depression increased from 92.56 million in 1990 to 158 million in 2019, with about 6.13 million being from 10 to 19 age range in 2019 (Dattani et al., 2021). Similarly, teachers in Asia have also been found to experience challenges in relation to their own well-being and supporting the well-being of their students (Amzat et al., 2021; Lou & Chen, 2016). Insights drawn from positive psychology and positive education research can benefit students and teachers in general—such insights, as presented in this book, would be particularly valuable for those in Asian educational contexts.

Though this book was conceptualized before the Coronavirus Disease 2019 (Covid-19) pandemic, the book production process coincided with the pandemic. This context has highlighted the practical urgency of focusing on students' and teachers' well-being given that the pandemic has exerted a heavy toll on well-being and caused increases in mental health problems not only in the general population but also in school contexts (Ettman et al., 2020; Liu et al., 2020; Mendoza et al., 2023; Ozamiz-Etxebarria et al., 2021; Rajkumar, 2020; Savage et al., 2020;

Tan et al., in press). Moreover, the book recognizes the important role of teachers and school-wide support for the successful implementation of a positive education program. Indeed, teachers' attributes and well-being have been found to affect classroom processes and student outcomes (Zee & Koomen, 2016); and complementary school-wide processes assist in building a culture for well-being (Allison et al., 2021; Norrish et al., 2013; Riedel et al., 2020).

Given the theoretical and practical importance of positive education research in Asia, the book consists of chapters that use positive psychology and education perspectives to explore students' optimal flourishing, teachers' well-being, and school-wide approaches to positive education. The book consists of four sections and 19 chapters.

Factors and Processes for Fostering Students' Well-Being

The first section comprises five chapters that showcase research on various factors and processes relevant to the promotion of students' well-being. In particular, this section provides insights into the potential benefits of developing students' character strengths (e.g., resilience, kindness, self-efficacy, hope, caring, self-control, and inquisitiveness) and how they can be cultivated in school setting. Character strengths pertain to positive trait-like characteristics that are universally valued and recognized as essential for attaining a good and worthy life (Park & Peterson, 2006; Ruch et al., 2021); they lie at the core of the positive psychology literature and are regarded as psychological ingredients for understanding and promoting optimal functioning and well-being (Peterson & Seligman, 2004).

Chapter 2 by Caleon and colleagues focuses on a central construct in positive education—resilience—which pertains to positive adaptation in the face of adversities and setbacks (Martin & Marsh, 2009; Wang et al., 2022, 2023). They conducted interviews with students which yielded important insights into the factors and mechanisms that shape how resilient students manage to deal with academic challenges. They also provided suggestions as to how teachers, parents, and peers can help cultivate the academic resilience of students at risk of tracing a trajectory of poor academic outcomes.

Chapter 3 by Lee and Huang delves into students' sense of school belonging which pertains to students' sense of connectedness to the school community (Allen et al., 2018). They used latent profile analysis to understand the different profiles of school belonging among Hong Kong primary school students. They also investigated how the character strength of kindness was associated with the school belonging profile. Their findings highlight the necessity of a greater emphasis on building students' sense of belonging and their character strength of kindness.

Chapter 4 by Frondozo and Yang examines the role of students' feedback perceptions on their academic emotions. They found that self-efficacy predicted students'

positive emotions. Their results suggested that promoting students' feedback self-efficacy could facilitate the development of positive emotions in students' learning experiences.

Chapter 5 by Bernardo and Cunanan looks at locus-of-hope in students. This construct includes hope rooted in one's own agency (internal locus-of-hope) as well as how family (external-family locus-of-hope) and friends/peers (external-peer locus-of-hope) may help in realizing a student's important goals in life. They found that external-family locus of hope compensates for weak internal and external-peer locus of hope. Their chapter highlights the importance of taking a more collectivist conceptualization of hope and discussed the implications of this theorizing on hope-building interventions for students.

Chapter 6 by Chen and colleagues explores the role of character strengths as protective factors for disadvantaged students. Relative to their peers in the high-ability track, those in the low-ability track had lower levels of the character strengths of caring, self-control, and inquisitiveness. Furthermore, the results of the study demonstrated that character strengths compensated for socioeconomic disadvantage, as character strengths were related to enhanced school adjustment among students in the low-ability track.

Teacher Perspectives on Well-Being

The second section extends the scope of positive education to teachers, and thus, complements the first section which focuses on students. This section covers core topics such as teacher perspectives on positive education, teachers' job performance, and teacher support.

Chapter 7 by Lim focuses on how positive education was implemented in a secondary school in Singapore. They used a qualitative longitudinal case study approach to seek the views of both teachers and teacher-leaders who were involved in the school's implementation of positive education. Their study revealed how teacher practice was impacted as the result of how positive education was conceptualized and implemented in the school context.

Chapter 8 by Chen and colleagues explores the relationship between teacher emotions and their job satisfaction among Chinese teachers. Emotions of love and joy were positively associated with in-role and extra-role job performance. The negative emotion of fear was negatively related to extra-role performance. The results of their study shed light on how different emotions were associated with teachers' job performance.

Chapter 9 by Lam hones in on the cross-cultural applicability of self-determination theory in Asian contexts. Self-determination theory posits the importance of autonomy-supportive teaching for promoting student learning and well-being. However, Asian teachers are typically described as authoritarian. Focusing on two Hong Kong Chinese teachers, she showed that these two teachers are largely

autonomy-supportive in their teaching demonstrating support for the theory's cross-cultural applicability. She also highlighted how the two teachers' beliefs and practices resembled Confucian philosophical ideas demonstrating the characteristics of being altruistic, the self as relational, and self-cultivation. Her study showcased the importance of considering both universal psychological concepts and culturally-specific beliefs in understanding teachers' behaviors.

Chapter 10 by Sumi and Sumi also draws on self-determination theory and emphasizes the role of teachers in supporting students' basic needs for autonomy, competence, and relatedness. They focused on Arabic language teachers in Japanese universities. Using longitudinal data, they showed that Arabic teachers' support for their students' basic psychological needs for autonomy, competence, and relatedness promoted students' need satisfaction.

Chapter 11 by Chen examines grit among Chinese migrant children. Using a prospective longitudinal design, she found that social support from the mother and teachers positively predicted grit. Aside from these external sources of grit, she also identified the importance of individual differences in temperamental effortful control in predicting grit. She encouraged researchers to shift from a deficits-based to a strengths-based perspective when conducting research on migrant children.

Fostering Well-Being in Schools

The third section focuses on practical applications of positive psychology to promote well-being in school settings. This section is wide ranging and covers studies that applied a whole-school approach as well as more specific interventions focused on building gratitude, social and emotional learning, growth mindsets, deep breathing, and mindfulness techniques among others.

Chapter 12 by Caleon and Chua describes how a school in Singapore adopted a whole-school approach to positive education. Their paper described the schools' journey towards adopting the principles of positive education from initial conceptualization to enactment of the well-being curriculum framework. Their study provided insights into the challenges and enablers of adopting a positive education paradigm in the Asian educational context.

Chapter 13 by Nalipay and colleagues illustrates how an international school in Hong Kong integrated a gratitude intervention into an academically focused extra-curricular activity. They described how the program was implemented, the different types of feedback they obtained from students and counselors, and their recommendations for an improved program. Their study showed how counselors could develop programs that simultaneously targets both the enhancement of academic skills and socio-emotional well-being.

Chapter 14 by Lee and Fong examines the effectiveness of a growth mindset intervention in a sample of community college students in Hong Kong, who are typically more disadvantaged compared to their peers who matriculate in the university. Relative to the control group participants, those given the growth mindset intervention

were buffered from a decline in growth mindset across time. Results have important implications for more disadvantaged students who might be at a greater risk for seeing their intellectual abilities as fixed and to label themselves as less capable than their more advantaged peers.

Chapter 15 by Chye and colleagues notes that mental health services have mostly adopted a reactive approach, focusing on the diagnosis and treatment of pathologies. They then proposed a holistic framework for the prevention and remediation support for mental health in schools. Their model is based on a careful analysis of existing models, promising practices, and technological applications.

Chapter 16 by Sun and colleagues illustrates the importance of shared book reading in facilitating children's social and emotional learning. They conducted a systematic review on shared book reading in Asian contexts and found that it increased children's social-emotional understanding, racial acceptance, and prosocial skills.

Chapter 17 by Khng describes the importance of two sets of techniques—deep breathing and mindfulness-based practices—to help promote students' resilience and well-being. Her paper provided evidence supporting these two techniques, illustrated the underlying psychological mechanisms, and emphasized how these techniques could complement the aims of positive psychology and positive education. She paid particular attention to how these techniques could be applied to the Asian school setting.

Cultural Perspectives on Flourishing and Well-Being

This last section consists of three chapters which argue for the importance of taking a culturally-informed approach when exploring flourishing and well-being. Chapter 18 by Chue looks at the validity of different psychometric instruments designed to measure well-being. She recognized that many of these instruments were initially developed in Western societies. She asserted that different cultures emphasize different dimensions of flourishing to varying degrees and suggested that researchers engage in more evidence-based evaluations of measurement tools to ensure that the instruments are well-suited to the Asian context.

Chapter 19 by Kibe argues for the need to consider cultural and individual differences in developing positive education programs as much of the existing research is based on Western contexts. An empirical study is also presented as an example of a culturally-adapted positive resilience program. This chapter highlights the importance of adapting Western-developed interventions to fit the cultural and educational context in which the intervention will be implemented.

Chapter 20 by Ronen emphasizes the importance of well-being during childhood and adolescence in relation to the risk factors that might be encountered during these periods. Furthermore, Ronen stressed the need to boost well-being for both low- and high-risk youngsters. She also discussed the cultural characteristics of Israeli children

and adolescents (both Jews and Arabs) and reviewed the nature and/or efficacy of interventions espousing a positive psychology approach.

Conclusion

Collectively, the chapters in this volume utilized diverse methodologies, including correlational, experimental, quasi-experimental/intervention, longitudinal, and qualitative approaches from six different Asian socio-cultural contexts—Singapore, Hong Kong SAR, Mainland China, Israel, Macau SAR, and the Philippines. They also covered several key positive psychology and education topics/themes, such as well-being, resilience, grit, growth mindset, and positive emotions among others. Though by no means exhaustive, these chapters reflect the growing dynamism and surging interest in positive psychology and education research in Asian contexts. These chapters provide a rich knowledge base that can be translated into empirically-driven approaches to promote well-being and flourishing of students and teachers in the educational context.

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Part I
Factors and Processes for Fostering Student Well-Being

Chapter 2
Factors and Processes That Facilitate the Development of Academic Resilience: Perspectives from Students in Singapore

Imelda Caleon, Simon Qing Wei Lim, Nur Qamarina Ilham, Wei Xun Koh, Chee Soon Tan, and Youyan Nie

Abstract Positive psychology focuses on human strengths and virtues, development of resources, and the nature of processes and experiences that promote flourishing. One phenomenon that has captured the attention of the leading advocates of positive psychology is resilience, which pertains to positive adaption in the face of significant adversities and setbacks. This chapter focuses on academic resilience, which is a form of resilience that unfolds within the realm of education. Noting the scant literature that examines academic resilience within Asian cultural contexts, this study aimed to examine the development of students' academic resilience through semi-structured interviews conducted with 16 students who were drawn from a large sample of Grade Nine students from Singapore schools. Applying thematic analysis on the interview data, three key findings were distilled: (1) goal-directed thinking, goal pursuit and future orientation; (2) framing and tackling failure; and (3) receiving support from significant others. The results of the study provide insights into the factors and mechanisms that shape how "resilient" students manage to deal with academic challenges effectively, and suggest possible ways by which teachers, parents, and peers can help cultivate the academic resilience of students at risk of tracing a trajectory of poor academic outcomes.

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Practitioner Points

Teachers and school leaders are encouraged to adopt and then examine the effectiveness of the following approaches to foster academic resilience in their students:

- teaching students to carry out effective goal setting strategies and action plans;
- creating structures and opportunities for students to forge positive and supportive relationships with peer and teachers;
- establishing peer support networks among students to provide care and support for one another when facing school challenges and setbacks; and
- guiding students to actively process failure and learn from it.

Positive psychology is a growing field that focuses on factors, conditions and processes that promote well-being and flourishing (Buck et al., 2008; Pluskota, 2014). One phenomenon that has captured the attention of scholars who serve as advocates of positive psychology is resilience, which pertains to positive adaption in the face of significant adversities and setbacks. With the increased pressure for students to perform well in schools, which is being perceived by many as a key factor that tend to undermine students' well-being and functioning, the last few decades have seen an increasing interest on the development of students' academic resilience, which refers to resilience that develops in the realm of education. The concept of academic resilience is gaining traction for its strong links with student outcomes (Kaufman et al., 1994; Martin & Marsh, 2009; Masten et al., 1999). The notion of academic resilience is especially relevant when students transition from primary to secondary school, during which they face a multitude of changes and challenges. If this transition period is not managed properly, students may experience maladaptive outcomes, such as higher school anxiety, lower motivation (Harter et al., 1992), and lower self-esteem (Waxman et al., 1997), which could erode school performance (Cappella & Weinstein, 2001). To address these concerns, scholars assert that students facing significant difficulties in both their personal and school life need to be provided with various forms of support and resources in order to achieve adaptive school outcomes—that is, to develop academic resilience (Masten & Tellegen, 2012).

While the importance of academic resilience in student development has been acknowledged by many scholars (e.g., Borman & Overman, 2004; Christiansen et al., 1997), some have also cautioned against examining the resilience process with minimal regard for the context or culture where it unfolds (Ungar, 2008) and encouraged the use of qualitative methodologies for discovering the unknown factors and localized aspects of the process (Ungar, 2003). Many of the existing studies on resilience were conducted in Western contexts (e.g., Kaufman et al., 1994; Waxman et al., 1997); there are limited studies conducted in non-Western contexts (e.g., Broekman et al., 2011; Kim et al., 2005; Kwang & Tang, 2011). Most of the existing studies employ quantitative research methodologies to examine factors associated with and influencing academic resilience (e.g., Kim et al., 2005; Kwang & Tang, 2011). While the quantitative methodology is beneficial in explicating different resilience enabling factors and mechanisms, the use of the qualitative

methodology can provide a more nuanced understanding of how these factors and mechanisms interact and play their parts in the resilience process. Noting these gaps in the extant literature, this chapter supplements the limited literature on academic resilience framed in non-Western contexts and draws upon students' perspectives and experiences to generate deep insights into the personal and contextual resources that can facilitate the development of academic resilience. This organic approach can pave the way for the crafting of intervention programmes to boost students' positive adaptation to adversities within Asian education settings.

Resilience Process: Risk and Protective Factors

Despite the interest shown by scholars on resilience, the conceptualisation and operationalisation of the construct remain nebulous. These scholars generally adopt two ways of conceptualizing resilience: as a personality trait or as a dynamic process. When framed as a personality trait, resilience is regarded as a set of attributes that include the ability to address novel situations, ability to remain focused and calm under stressful situations, and flexibility in dealing with varied environmental events (Gjerde et al., 1986). Resilience, conceptualized using the process-based approach, connotes positive adaptation within the context of significant risk or adversity (Luthar & Cicchetti, 2000). Resilience developed within the education setting is termed as "academic resilience" (Borman & Overman, 2004) or "educational resilience" (Padron et al., 1999).

When trying to unpack academic resilience as a process, researchers are usually interested in the concepts of risk, protective factors, and the processes and outcomes linked to positive adaptation. Risk factors pertain to conditions, attributes, or experiences that may directly or indirectly predispose students towards negative outcomes. Some examples of these risk factors include low cognitive ability (Flouri et al., 2011), low socioeconomic status (Borman & Overman, 2004) and poor school performance (Cappella & Weinstein, 2001). Positive adaptation, on the other hand, connotes manifestation of competence or success in academics, social relations, and other goal-related activities (Masten & Powell, 2003). Several researchers consider at-risk students' high-performance gains relative to low baseline scores (Borman & Overman, 2004; Cappella & Weinstein, 2001) or achievement of educational milestones (Finn & Rock, 1997) as hallmarks of resilience in the academic realm. Protective factors, which serve as another key component of the resilience process, refer to resources or assets present within individuals or in their social environments that might alleviate or neutralize the negative impact of stressors in their academic life (Finn & Rock, 1997; Henderson & Milstein, 1996). A handful of researchers (e.g., Borman & Overman, 2004; Cappella & Weinstein, 2001) have highlighted potentially effective protective factors that can be utilized by students, as well as schools, to facilitate resilience development.

Protective Factors for Developing Resilience

Contemporary research has consistently underscored the influence of psychological resources on students' academic outcomes in the presence of adversities. These psychological resources include, inter alia, one's self-esteem, internal locus of control, as well as future aspirations (e.g., Finn & Rock, 1997). In addition, having the ability to identify the possible causes of failure (Cappella & Weinstein, 2001) and the ability to deal with failure (Perez et al., 2009) have also been highlighted as two important factors in developing academic resilience. Scholars have also found that being hopeful and positive about the future, can also contribute to the development of academic resilience in students (Snyder et al., 2002; Yeager & Dweck, 2012). Aside from these psychological resources, students' adaptive behaviour and school engagement are also important in the resilience development.

Studies have revealed that protective factors such as attentiveness, being task-oriented, and the willingness to participate in activities, also help students who are facing the risk of continued poor academic performance to turn their achievement around (Finn & Rock, 1997; Padron et al., 1999). Notably, academically resilient students tend to display positive characteristics such as having higher level of satisfaction and fewer conflicts with other students in school (Waxman et al., 1997). In contrast, their less resilient peers tend to be less motivated, have poor attendance in school, and engage in disruptive behaviours in class (Garmezy et al., 1984).

Beyond psychological and behavioural aspects, the role of social factors in the resilience process is also crucial. For students who are facing challenges in school, receiving unwavering support and encouragement from their family members, teachers, and peers are paramount in overcoming adversities (Guay et al., 2013). Researchers focusing on academic resilience have consistently reported that resilient students tend to experience supportive relationships from family and peers (Chambers et al., 2006; Gonzalez & Padilla, 1997), and considered their teacher as their source of strength and support to deal with challenges in school (Nettles et al., 2000). Such supportive social climate is necessary to facilitate resilience building (Borman & Overman, 2004).

Although the aforementioned insights were drawn largely from studies conducted in Western countries, some of such insights were also traced in a few resilience studies implemented in non-Western contexts such as Hong Kong (Cheung et al., 2014; Shek, 2002), Korea (Kim et al., 2005), and Singapore (Cheung et al., 2014). Some of these studies (e.g., Shek, 2002) suggest that Asian students who grew up in supportive families tend to have better psychological well-being and social-emotional behaviours, resulting in better academic outcomes. In addition to the influence of familial support, teachers' support, hopeful thinking, and viewing life as meaningful were also identified as key enabling factors for students to positively adapt to challenging conditions that they encounter in school (Kim et al., 2005).

Process Mechanisms for Resilience Development

Besides identifying the various protective factors that enable students to positively adapt to various stressors present in their academic life, scholars also increasingly focus their attention on the mechanisms that underpin the resilience process (Luthar et al., 2000). To face stressors or adversities effectively, scholars outlined various coping mechanisms. One mechanism that may operate in the process of resilience development can be drawn from self-determination theory (SDT). SDT foregrounds the satisfaction of three basic psychological needs—the need for developing competence, establishing relatedness or connections with others, and having autonomy in regulating one's actions—as key for optimal functioning and growth (Deci et al., 1991). When the basic psychological needs of students are supported, they tend to seek and welcome different opportunities to learn (including from mistakes or failures), as they find learning enjoyable and purposeful (Deci et al., 1991; Dolmans et al., 2016). These behaviours are likely to result in deep learning and better academic outcomes (Chotitham et al., 2014). Students who receive relational, competence and autonomy support from significant others, such as parents, teachers, and peers, can boost their inner resources, which, in turn, can contribute to the development of resilience (see Vansteenkiste & Ryan, 2013). Conversely, if students have limited access to these supportive relationships, they are likely to feel amotivated to learn (Anderson et al., 1976), which can thwart adaptive functioning in times of distress (see Vansteenkiste & Ryan, 2013).

Another mechanism for resilience development is underpinned by hope theory, which underscores the importance of goal-directed thinking to achieve positive outcomes (Snyder et al., 1991, 2002). The theory also emphasizes the importance of focusing on end goals in the face of challenges, having the confidence and determination to deal with the challenges, and generating multiple pathways to overcome the impediments to one's goals (Snyder et al., 1991, 2002). These points are supported by several studies (e.g., Waxman et al., 1997) indicating that resilient students often manifest goal clarity and determination to pursue their goals through different pathways.

Goals provide purpose and meaning to an activity or task (Yeager & Bundick, 2009). Life purpose pertains to the intent to accomplish something while meaning is about having a sense that life has significance and impact beyond the self (Yeager & Bundick, 2009). When young people think about their goals in relation to their future occupation, they can see themselves contributing to the world: This line of thinking can lead to the development of a better sense of meaning and purpose in life and improvement in the motivation to learn (Yeager & Bundick, 2009). Identifying life goals may reduce disengagement in school (Eccles, 2004) by providing students reasons to believe that their schoolwork is part of a bigger- or longer-term goal that can provide meaning to their lives (Baumeister, 1991). Having a sense of meaning and purpose can spawn hope in the face of failure (Frankl, 1959). When adolescents think about and commit to their future goals, they can develop a sense of identity and

integrity that can function as a protective factor when they face challenges (Yeager & Bundick, 2009) and promote resilience development.

Interestingly, the nature of future goals may also be influenced by culture. This is probably because culture shapes the ways individuals view themselves and the world, with those in collectivistic cultures being more inclined to construe the self as a connected or relational entity while those from individualistic cultures tend to construe the self as a separate or distinct entity (Markus & Kitayama, 1991). Imagined future selves of collectivists tend to be more related to social relationships while those of individualists tend to be more focused on abilities and education domains, at least for adult samples (Waid & Frazier, 2003). Attaining positive personal outcomes was more valued and emphasized in individualistic cultures than in collectivistic cultures (Elliot et al., 2001).

Attitude towards failure, which is closely tied to one's goals, is also influenced by cultural orientation. Collectivists, relative to individualists, tend to report higher fear of failure (Eaton & Dembo, 1997). In particular, students from collectivistic cultures tend to exhibit greater fear of academic failure, which is probably due to higher achievement expectations of and perceived pressures from their significant others, particularly their parents (Eaton & Dembo, 1997; Mau, 1997). Students with high fear of failure may shun difficult tasks or disengage from the pursuit of their goals when facing challenges to avoid the unpleasant feeling of missing the target or negative perceptions of others (Elliott & Dweck, 1988). However, it is interesting to note that many students from collectivistic cultures, despite having higher tendency to avoid failure, were reported to persevere in the face of academic challenges because of relational motives—that is, to fulfil social obligations and promote or maintain the honour of their families (Sandoval-Hernández & Białowolski, 2016).

The interplay among goal-oriented and pathways thinking, need satisfaction, and culture has received limited attention in the resilience literature, and much less in relation to adolescent samples. This study will address this gap.

Purpose of Study

This study draws upon the risk-resilience paradigm, along with motivation and hope theories, to examine the different factors and mechanisms that support or facilitate the development of academically at-risk students' academic resilience. In the context of this study, academically at-risk students are those who entered secondary with low initial achievement. Framed in the Singapore education setting, the insights distilled from this study will provide nuanced insights that can enrich the scant literature on the development of academic resilience in Asian educational contexts.

Methodology

Participants

The participants for this study were identified from a larger research project that examined the academic resilience of 1305 secondary students from 22 secondary schools in Singapore. The students were followed from Secondary 1 (S1, Grade Seven) to Secondary Three (S3, Grade Nine). In selecting our sample for interview, we first identified "academically at-risk" students in two focal subjects–Mathematics or English Language (EL). These students had to meet the following criteria: (1) had aggregate score lower than the cohort mean in a national examination given at the end of primary school; (2) received failing grades in either or both focal subjects at the end of S1; and (3) scored below the 23rd percentile in a standardized achievement test for EL (i.e., reading comprehension) and/or Mathematics. We considered academically at-risk students who scored above the 23rd percentile of the standardized test and/or received passing grades at the end of S3 as those who developed substantial academic resilience (henceforth, "resilient"). We found 90 out of 286 academically at-risk students in EL and 84 out of 365 academically at-risk students in Mathematics to be academically resilient. We selected 16 students who were academically resilient in both EL and Mathematics. We deemed that these students are in a good position to provide in-depth and first-hand accounts to address the objectives of the study.

Interview Procedure

Semi-structured interviews were conducted individually with the students to generate insights into the processes and factors that have helped students who were facing academic challenges and starting secondary school with failing marks to achieve satisfactory academic performance after three years. This form of interview allows the students to respond to the key questions relating to the study and provide them with opportunities to express their thoughts freely concerning the questions. Each interview session took about 30–45 minutes and were conducted in the participants' respective school libraries or classrooms. The interview protocol used in this study comprised three stages: (1) providing an introduction of the study and the purpose of the interview; (2) eliciting rich descriptions from students on their three-year academic journey and school experiences, particularly the highs and lows; (3) eliciting possible factors and processes that could have promoted the students' improvement in their academic performance. The key questions that were used in the interview for the academically resilient students were as follows:

- Can you describe how your performance in key subjects changed over time?
- Is there anything or anybody that you would credit for what you have achieved academically? If yes, can you elaborate how this person or thing have helped

you to improve in school?/Is there any person who has helped you become more capable in dealing with challenges at school? If yes, briefly describe how this person has helped you become more capable in dealing with challenges at school.
- What qualities do you have/possess that enabled you to achieve academically?/ What do you think are some of your qualities that have helped you to become successful in school?

With the participants' consent, audio recordings were taken during the interview sessions. Pseudonyms are used to protect the identities of the participants.

Data Analysis

The audio recordings were transcribed verbatim before being subjected to thematic analysis (Braun & Clarke, 2006). Each transcript was coded with descriptive codes through three rounds of coding (Saldaña, 2013). In the first round, the interview data was coded based on the questions to gather the most relevant data for further analysis. In the second round of coding, the data was organised and grouped into categories. For the last round of coding, main themes were consolidated based on the interconnections among the categories. In-depth discussions between two of the authors were carried out in developing the categories and themes. Whenever disagreements occurred, clarification from both parties were sought until a common ground was achieved, with some categories and themes modified during the process.

Results and Discussion

After conducting thematic analysis of the interview data, three main themes were identified as important in facilitating students' academic resilience. These themes are: (1) goal-directed thinking, goal pursuit and future orientation; (2) framing and tackling failure; and (3) receiving support from significant others. The discussion on the main themes is presented with representative excerpts from the students' interview transcripts in this section.

Goal-Directed Thinking, Goal Pursuit and Future Orientation

The interviews with the academically resilient students suggest that the nature of their goals and how they pursued their goals, which are both linked to their motivation and sense of meaning and purpose, as key elements of the mechanisms that seem to have facilitated the development of the students' academic resilience. The students referred to having clarity, focus and commitment in relation to their goals and having

positive expectations about goal attainment. While their eyes were fixed on their goals, they remained aware of the challenges that lie along the path leading to their goals and drafted plans to address such challenges accordingly.

Having goal clarity can be gleaned from the comments of several resilient students. For example, one student indicated that having her eyes on a future career is a key factor that motivated her to work harder and improve her academic performance.

> I think about my future … I want to become a nurse [because] my mother is a nurse … I will be the head nurse. **[S7]**

S7 serves as an example of how the resilient students' goals are socially oriented—one that is modelled after their significant others. Furthermore, when the resilient students were asked on how they see themselves in the coming years, they expressed having future aspirations that are closely tied to their familial values and sense of responsibility. Such aspirations appear to ascribe meaning and purpose in school activities that extend beyond themselves.

> Someone who can achieve the goal he put [sic] or she put [sic] … Actually, I would do any job unless [sic] it's a good job but [it] still can support my family. I'm going to aim [to be] like some computer tech, stuff like that. **[S1]**

> I hope to see myself successful in five years' time because I want to support my parents in the future [and] repay them for what they did for me when I was younger. **[S16]**

The above excerpts are in consonance with Markus and Kitayama's (1991) claim on the predominantly relational nature of the self-construal of individuals from collectivistic cultures. For the current sample of students, such relational self-construal could have influenced the way they imagined their future selves.

Moreover, it is worth noting that for other resilient students, goal clarity and focus are accompanied by a positive belief in their capability to achieve goals and a failure-avoidant attitude that led to enhanced engagement in learning tasks. This point is illustrated by the following excerpt.

> [I] know that if [by the] end of [the] year I don't do well, I know things will be bad … If I fail then it would be very embarrassing. So, I start thinking about it [and] then be even more focused about it. So, in the end I believe that if I focus on what I want to do, I can actually do it. **[S2]**

Although having the disposition to avoid failure is usually associated with low academic aspirations, anxiety, and helplessness in the face of academic challenges (Elliot & Church, 1997; Elliot & McGregor, 2001), it appears that having it in combination with positive self-concept, propelled at-risk students to develop academic resilience.

Other students also expressed how they worked towards their desired goals through proper planning and adopting several strategies. All these findings point to the positive influence of hopeful thinking on academic outcomes (Snyder et al., 2002) and academic resilience. The study strategies that the students applied to achieve their goals seem to be common or "normal", but what is worth noting is the social orientation of such strategies.

> My style is like to … from now point [sic]onwards, I have to bring one notebook so I can write all my Maths [notes] down. So, for example, if I don't know this, right, I can write down two three times so I can remember. **[S1]**

> One of the things I do [is to] revise [my lessons]. In school [or] in class, [I] always listen to [my] teacher, take [down] notes, [and] do [my] homework. Basically, normal stuffs ah, like go to school, just listen to teacher … hang out with family [members] or maybe talk to teachers for more advice and usually set a target to yourself that you can do it. And if you have some difficulties, always ask people. **[S15]**

Besides having tangible plans and applying varied strategies to achieve their goals, some participants also ascribed their academic resilience to goal persistence. During the interviews, they highlighted the importance of enduring effort in the process of achieving their goals. Two key elements could be distilled from the participants' responses: (1) a positive outlook in the face of adversity, and (2) adopting a 'never give up' attitude. Such determination could be inferred from the following comments:

> I will like never give up. I always believe in myself and when I have difficulties, I will ask for help. **[S9]**

> [I will be] like really paying close attention and keeping up with the homework that the teacher assigned … Try not to get distracted … I just got to be consistent with my work and everything. **[S12]**

Another factor that was noted as contributing to the development of the students' academic resilience was their awareness of personal responsibilities and ownership over their future. These seem to have motivated them to actively engage in learning opportunities (Froiland et al., 2012; Ryan & Deci, 2000) and work harder.

> [T]hey say Math is [the] most important subject in school time [sic] but I [am] always failing Math. So when I think about my N levels, I say no matter what, I need to pass my Math because I want to make my report [card look] very good. I don't want Maths to ruin my report [card]. This motivates me like, I need to pass Math lah. **[S16]**

> [T]he exam is not for the teacher, [it] is for us. So, if we pass or fail, [it] is our problem. I think I need to study hard. **[S6]**

The responses of the resilient students suggest the importance of having positive mindsets and attitude about the future in dealing with academic difficulties as they worked towards their goals (Yeager & Dweck, 2012). This future-oriented thinking, which is often intertwined with a socially oriented sense of purpose, appear to be among the key drivers of the students' journey to resilience.

Framing and Tackling Failure

Besides setting clear and achievable goals, another potentially resilience-enabling factor that has been identified during the interviews is about how the participants perceived and managed failures. In the discourse on academic resilience, facing failure is an indispensable component (Perez et al., 2009). In this study, several

resilient students seem to suggest that having a positive mindset about failure is paramount in overcoming adversities and achieving success. They also highlighted the need to adopt an active approach in dealing with failure, such as learning from failure and seeking help.

> Some people say failure is the key to success … Actually, it's yes [I agree] so I can learn from my mistakes, so I know which one I [am] like weak at, [and] so I can ask the teacher. [I] do supplementary class on this part I don't understand … That's what my Mum told me like, 'You don't be quiet at class. When you don't know things, you can ask for remedial [or] just ask [your] teacher.' **[S1]**

From the interviews, some participants shared that it was important for them to be aware of the reasons for their academic failure, before taking remedial steps to address their weaknesses.

> I refer to the previous test that I did … I looked at my mistake and make sure that I didn't [sic] do any mistake like that anymore. **[S8]**

> [I] looked through why I get low marks and then like do better. **[S11]**

Some students mentioned "laziness" and "never study" as causes for their unsatisfactory results in school. In a particular interview, the participant was able to attribute his unsatisfactory performance to a specific cause:

> My phone [is the reason for my bad performance]. I love to watch shows on my phone. So, I [think I] watched at the wrong time. **[S6]**

The participants' propensity to reflect on their mistakes, instead of simply dismissing them as they move forward, is likely to generate deep learning from their experiences of failure. This process can be regarded as an act of meaning-making (Dolmans et al., 2016)—an essential component of deep learning that has been associated with better academic achievement (Chotitham et al., 2014).

With the knowledge of the possible causes for failure, academically resilient students expressed the intent to engage in remedial actions.

> When I fail, I always like [to] learn from my mistake so I won't repeat the same mistake over and over again … I'm going to make sure that the next time I try [to do my class tasks or tests] again, I won't fail. [**S16]**

In other words, the academically resilient students responded to failure with constructive actions. For some students, these constructive actions included watching inspirational videos, writing notes, and recapping their schoolwork. While the above practices did not seem out of the ordinary, the thinking process that preceded them are noteworthy. For these participants, going back to their areas of weakness spelt a renewed opportunity for them to understand their mistakes and to address them. These responses were reflective of an internal locus of control which has been found to be related to academic resilience (Cappella & Weinstein, 2001).

Aside from actively processing failure and distilling lessons from it, a common comment found across the narratives of the resilient students was the view that failure was not a permanent state. Instead, it was a temporary condition which could

be changed in the future when they opt to engage in remedial actions. These ideas could be gleaned from the following comments of two resilient students:

> [W]hen you fail, there will always [be] like [times when] you will get there. Because when you get to success [sic], there's [sic] always failures. **[S9]**

> [I] definitely feel that I have to really improve the next time round if this [class task or examination] ever happens again. **[S12]**

Apart from overcoming one's failure and feeling hopeful about the future, the resilient students also seem to recover quickly from setbacks by using positive self-talk. These attributes, which were also highlighted in earlier studies (e.g., Yeager & Dweck, 2012), can be inferred from the following interview excerpts:

> [What I do is] just look at the paper … [I] think for like one or two minutes. [And] then I just think, I can do this the next time. **[S1]**

> After the failure, I just forget about it. I just move on because it was my sec 4 [Grade 10] year. I have to move on and focus on my study for N-level. **[S15]**

With the ideas that we extracted from the students' interviews, it can be surmised that having the ability to frame and process failure productively is crucial in the development of academic resilience. The expressed ideas of academically resilient students suggest that they view the failure that they faced as a challenge, examined the factors and processes contributing to such failure, and engaged in corrective actions to prevent future failure.

Receiving Support from Significant Others

While pursuing clear goals and managing failures are important for building students' academic resilience, experiencing a supportive social climate (Borman & Overman, 2004) might also be helpful in developing students' academic resilience. A large proportion of the students interviewed mentioned about the varied forms of support that they have received from significant others when dealing with academic challenges. In consonance with the report of Guay et al. (2013), several students shared that receiving motivational support helped them to improve in their school performance.

> She [mother] want [sic] me to get good grades. She don't [sic] want me to be a failure in life. She always motivate [sic] me to study. [And] then I always follow her. I listen to her advice. **[S16]**

> My teachers will help me … Ahh like usual ah don't give up, try your best. **[S8]**

Besides having motivational support, another prominent aspect that have been surfaced during the interviews was the area of competence support (c.f. Froiland, 2011), which was often done through provision of instrumental aids and remedial sessions.

My teachers will help me. Teachers … they will make an extra class for me. She also give [sic] me homework [or] extra homework. **[S8]**

Competence support was also provided in relation to goal setting and planning.

I am not focused on my study. So on [sic] that day onward, my parents gave me [a] target so I can be focused on my study and achievement [sic] what I want. So that was really helpful for me. **[S15]**

Aside from the support given by parents and teachers, many of the students interviewed also underscored the role of their peers in overcoming academic challenges successfully (c.f. Froiland et al., 2012). The support from the peers usually came in the form of encouragement and mentoring, as indicated in the following excerpt.

Whenever I am not sure of anything, I will go and ask him [friend] and he will help me. **[S2]**

The preponderance of support received by the students in this study is not surprising within an Asian culture, where individuals are willing to seek help from others when they encounter difficulties (Kim et al., 2005; Shek, 2002). Research has established that the effects of receiving support from various sources, when compared with that coming from only a few individuals, could have stronger positive influence on students' achievement (Guay et al., 2013).

In summary, setting clear goals and plans to achieve goals; positive framing and active management of failure; and receiving a multitude of support from significant others are paramount in developing the academic resilience of students. The results of the study also suggest the important role of significant others in helping students setting goals and planning to work towards their goals. The crucial role of relational support in resilience development, as was suggested in the excerpts presented, is coherent with the results of few resilience studies implemented in non-Western contexts (Cheung et al., 2014; Kim et al., 2005; Shek, 2002).

Conclusion and Implications

The main premise of this study is that students' resilience can be developed when they have access to or utilize protective factors that buffer the effects of challenges or risk factors in their lives. To provide support for students at risk of poor performance at school and thereby develop their academic resilience, it is important to establish a better understanding of these protective factors and the underpinning process mechanisms that can help them effectively manage academic challenges. This study has utilized in-depth interviews of students who demonstrated the development of resilience.

The results of this study point to three key areas in promoting the development of academic resilience of at-risk students in the present sample of Singapore students. These areas include (1) goal-directed thinking, goal pursuit and future orientation, (2) framing and tackling failure, and (3) receiving support from significant others. In

this study, the student participants have indicated that they would like to accomplish something in their lives, which was also highlighted by Yeager and Bundick (2009); they seem to work towards this vision through the establishment of clear goals and having different strategies to overcome difficulties. While such practice of goal setting and goal pursuit are common in both Western (e.g., Waxman et al., 1997) and non-Western culture (Sandoval-Hernández & Białowolski, 2016), it is interesting to note that students in collectivistic cultural contexts, like Singapore, tend to consider their familial values and their sense of responsibility when they were envisioning and planning for their future (Markus & Kitayama, 1991). Such expression differs from those in individualistic culture where individuals tend to focus more on their own abilities and self-focused outcomes (Markus & Kitayama, 1991).

Besides having the ability to set goals and the concrete action plans to pursue them, the resilient students in this study have also demonstrated their ability to confront their failure positively by seeing them as learning opportunities, which was also underscored by Deci et al. (1991). The students were willing to address their setbacks with constructive steps and seek help from others to avert similar failures from recurrence, which was also reported in the study of Cappella and Weinstein (2001). In fact, these allowed the students to rebound quickly from their impediments (Yeager & Dweck, 2012). What is noteworthy from this observation is that such positive attitude towards managing failures could possibly be related to the students' cultural orientation (Eaton & Dembo, 1997; Mau, 1997). Unlike those in individualistic culture, students in collectivistic culture, such as those in Singapore, tend to persevere amid their challenges as they hope to fulfil their social obligations and bring honour to their families (Sandoval-Hernández & Białowolski, 2016).

Another key insight drawn from this study pertains to the support that the resilient students received from their significant others when they were trying to overcome adversities. The resilient students have reported that they received relational and competence support from their family members (particularly their parents), teachers (including private tutors), and their peers. Coherent with the results of earlier studies (Deci et al., 1991; Froiland et al., 2012), these forms of support seem to have enabled the students to improve on their academic competency, establish supportive relationships with others, and encouraged them to persevere during difficult times. The external support from educators, parents, and peers have been largely recognised in both Western (e.g., Gonzalez & Padilla, 1997; Nettles et al., 2000) and Asian literature (e.g., Caleon et al., 2017; Cheung et al., 2014; Kim et al., 2005) as a significant contributor in the development of students' academic resilience.

While this study has offered some nuanced insights on the factors and processes associated with the development of resilience from the students' perspectives and pointed to the crucial role of significant others as an enabler of the resilience process, it did not elicit the perspective of other members of the students' social circle, such as parents, peers, and teachers. Future studies can consider examining the resilience process from multiple perspectives to provide a more holistic view of the process, particularly in the Asian education contexts. It will also be productive to conduct studies comparing the perspectives of resilient with their less resilient peers to better explicate distinctive resilience-enabling factors.

Drawing from the voices of resilient students, we recommend some potentially productive approaches that can help in developing students' academic resilience. Schools can organize programs to equip students with the necessary skills to set effective goals and draw up action plans to achieve such goals (Snyder et al., 2002). Building strong and supportive relationship through open communication between student and teachers might also be helpful for developing academic resilience in students (Borman & Overman, 2004). In view of the important role played by parents, schools may want to consider ways to engage parents of at- risk students and share strategies that they could use to support their children in terms of goal identification and providing motivational support. Lastly, since peers can be a positive source of support, it may be beneficial to organize team building activities, peer counselling, and buddy systems to seed positive peer relationships among students (Chambers et al., 2006; Gonzalez & Padilla, 1997).

In summary, the present study highlights the importance of social support; goal clarity, focus and commitment; and positive failure mindset and expectations about the future as key enablers of academic resilience. Building resilience, just like other processes that reside under the umbrella of positive psychology, entails harnessing the power of both inner and external resources and strengths to pave the way towards flourishing in the face of life's harsh realities and challenges.

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Chapter 3
Sense of School Belonging and Kindness Among Hong Kong Primary Students: A Latent Profile Analysis

John Chi-Kin Lee and Jing Huang

Abstract Students' sense of school belonging (SSB) is linked with many meaningful educational outcomes. Though several studies have been conducted on SSB, most of these have used variable-centered approaches, with few studies examining profiles of students' SSB using person-centered approaches. To further understand this important concept, this study sought to identify different profiles of students' SSB by applying latent profile analysis to data from a sample of 1,173 students among 34 local primary schools in Hong Kong. The results revealed six profiles of school belonging (i.e., *Low SSB and Moderate Rejection, Moderate SSB and Moderate Rejection, High SSB and High Rejection, High-Moderate SSB and High Rejection, High-Moderate SSB and Low-Moderate Rejection,* and *High SSB and Low Rejection*). This study also investigated the relationship between the identified profile membership and character strength of kindness (i.e., motivation to be kind, recognition of kindness, and kind behaviours) among these students. The results indicated differences in character strength of kindness across the identified SSB profiles. The findings are in line with the view that school environment plays an important role in students' optimal development and highlight the necessity for a greater emphasis on school intervention programs on building students' SSB and enhancing their character strength of kindness.

Practitioner Points

- SSB interventions and programmes could identify students with different patterns of school belonging and provide an individualized training for each, which may be more effective to engage students in the training programmes and enhance their sense of school belonging.

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- Kindness education programmes could include some modules related to sense of school belonging and provide support to students with high levels of feelings of rejection, which may in turn foster positive relations with peers and other school members and encourage kindness in school communities.

A sense of school belonging (SSB) plays a significant role in educational settings (Korpershoek et al., 2020). Prior research has demonstrated a positive association between students' SSB and their academic attitudes, behaviours and performance (e.g., Demanet & van Houtte, 2012; Pittman & Richmond, 2007; Roeser et al., 1996; Sari, 2012), and between SSB and psychological well-being (e.g., Jose et al., 2012; Law et al., 2013; Nutbrown & Clough, 2009; O'Rourke & Cooper, 2010). Some studies have explored students' SSB in the Hong Kong context. Using the database of the Program for International Student Assessment (PISA) of the Organization for Economic Cooperation and Development (OECD), Chiu et al. (2016) found that adolescents in egalitarian cultures tended to have a stronger SSB than their counterparts in more hierarchical cultures (p. 175). Hong Kong students averaged 16% lower in their SSB scores than the average score of all OECD countries and regions (p. 185). Smith et al. (2020) used the data from the 2015 Trends in International Mathematics and Science Study (TIMSS) and examined the possible association between fourth grade students' SSB and their attitudes towards science. The results indicated that students' SSB was a positive predictor of *Students Like Learning Science* and *Students Confidence in Science* (p. 864). These studies used a variable-centred approach, assuming that the relationships between the observed variables of SSB, and between SSB and other variables were uniform within a given population (Daljeet et al., 2017).

To further understand students' SSB, this study adopted a person-centred approach (i.e., latent profile analysis; LPA) to identify different profiles of SSB among Hong Kong primary students. LPA allows researchers and educators to explore the relationships between variables in multiple unobserved subgroups within a population; it was appropriate for our purposes because variables measuring SSB may be perceived differently and associated differently with each other and with other variables (Asendorpf et al., 2001; Isler et al., 2016; Merz & Roesch, 2011; Specht et al., 2014). Furthermore, some studies have pointed out the difficulty in translating the theoretical importance of SSB into day-to-day school practices (Allen & Bowles, 2013; Allen et al., 2018). The findings of this study therefore could shed light on the development of SSB interventions and kindness education programmes.

Sense of School Belonging

SSB has been defined in multiple ways and used interchangeably with other terms (Allen et al., 2018; Anderman, 2002; Rowe & Stewart, 2009), including *school connectedness* (Jose et al., 2012; Libbey, 2004), *sense of community* (Osterman, 2000), *school bonding* (Simons-Morton et al., 1999), *student engagement* (Finn,

1993), *school attachment* (Hallinan, 2008), *school identification* (Sirin & Rogers-Sirin, 2004; Wang & Eccles, 2012), *social identity* (Tajfel, 1972), and *positive interactions with others* (Hamm & Faircloth, 2005). Willms (2000) described SSB as an attachment to school, which relies on feelings of being accepted and on social interactions within the school community, such as relationships with peers and teachers. Friedman (2007) defined it as identity building in schools. Goodenow and Grady (1993) defined SSB as 'the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment' (p. 80). This definition was used repeatedly in the literature (e.g., Anderman, 2002; Knifsend & Graham, 2012; Ma, 2003; Nichols, 2006) and operationalised using the Psychological Sense of School Membership (PSSM) scale developed by Goodenow (1993). There have been follow-up examination and validation studies of the PSSM scale (e.g., Hagborg, 1994; You et al., 2011). Wagle and colleagues (2018) investigated the use of the PSSM scale with primary students across three contexts (China, the US and the UK) and found a unidimensional factor structure among the three samples. In addition, the total score of the PSSM scale was found to be positively related to gratitude and prosocial behaviour, and negatively associated with symptoms of distress.

Prior research has focused mainly on the impacts of school environment, teacher support, and peer support on students' SSB (Libbey, 2004). School environment has been found to play an essential role in developing students' SSB (Loukas et al., 2010; Slaten et al., 2015). Associations between school belonging and classroom climate, school size, presence of recreational facilities, school location and feelings of safety have also been documented (Anderman, 2002; Anderson et al., 2004; Chan, 2008; Cunningham, 2007; Garcia-Reid et al., 2005; Hallinan, 2008; Holt & Espelage, 2003; Shochet et al., 2007; Waters et al., 2010; Whitlock, 2006). Teachers have consistently been found to play a significant role in improving students' SSB (Anderman, 2003; Bowen et al., 1998; Brewster & Bowen, 2004; Garcia-Reid, 2007; Hallinan, 2008). Prior studies have provided evidence on the associations between SSB and various teacher-related factors, including teacher-student relationships (e.g., Anderman, 2003; Bowen et al., 1998; Brewster & Bowen, 2004; Garcia-Reid, 2007; Garcia-Reid et al., 2005; Reschly et al., 2008; Shochet et al., 2007, 2011; Waters et al., 2010; Zimmer-Gembeck et al., 2006), teacher academic support (e.g., Patton et al., 2006; Ryzin et al., 2009; Wentzel, 1998), and fairness demonstrated by teachers (e.g., Sakiz, 2012). Previous literature has also indicated that peer support is a strong predictor of SSB (Blomfield & Barber, 2010; Dotterer et al., 2007; Shin et al., 2007; Waters et al., 2010). Peer-related factors that are associated with SSB include feeling of being accepted by peers (e.g., Jennings, 2003; Shochet et al., 2011; Whitlock, 2006; Zimmer-Gembeck et al., 2006), peer academic support (e.g., Goodenow & Grady, 1993; Reschly et al., 2008), and peer emotional support (e.g., Ryzin et al., 2009).

SSB and Character Strength of Kindness

Basic Psychological Needs Theory (BPNT; Deci & Ryan, 1985, 2000, 2002) provides a framework for understanding the association between the social environment within a school context and an individual's optimal development and psychological well-being. BPNT posits that humans have three innate psychological needs, including needs for autonomy, competence, and relatedness. Autonomy concerns the experience of volition and self-governance of one's behaviours and choices. Competence denotes the experience of feelings of self-efficacy and mastery in interacting with the environment and achieving desired outcomes. Relatedness refers to the experience of a sense of belonging, connection to others, and mutual respect from others. Persistent satisfaction of basic psychological needs has the potential to result in optimal growth, integrity and well-being, whereas thwarting of fundamental psychological needs tends to contribute to passivity, ill-being, and defensiveness (Deci & Ryan, 2002). Relatedness fulfilment comes with a sense of belonging and establishment of warm and open relationships with other people in the school settings (Baumeister & Leary, 1995) and thereby, results in prosocial behaviours (e.g., acts of kindness and voluntary work) among students (Twenge et al., 2007). The need for relatedness is frustrated when students experience feelings of rejection and loneliness (Vansteenkiste et al., 2020), which leads to antisocial behaviours (Gagne, 2003; Tian et al., 2015).

Prior research has documented the positive effects of SSB on students' educational outcomes, including academic performance, school engagement, prosocial behaviour, self-efficacy, and gratitude (Froh et al., 2008; Osterman, 2000; Solomon et al., 1996; Tinto, 1997). Lee and Huang (2021) used multilevel structural equation modelling to explore the links between students' SSB, perceptions of school kindness, and character strength of kindness among secondary school students, and to examine possible gender differences in the study constructs. The results demonstrated the positive effects of SSB on students' perceptions of school kindness at both level of analyses, and on character strength of kindness only at the student level. Compared with boys, girls exhibited higher levels of character strength of kindness.

The Current Study

Given that most of the previous studies have used variable-centered approaches to explore relationships between SSB and other constructs, the current study took a person-centered approach (i.e., latent profile analysis) to investigate the heterogeneous groups of students with similar values on different dimensions of SSB. Although the dataset from the same large research project was used in this chapter and the previous published article (i.e., Lee & Huang, 2021), these two studies used different methods to address different research questions for different populations. Using LPA, the identified SSB profiles represent subgroups of primary students in

Hong Kong, characterized by the existing combinations of different SSB-related internal and external experiences. Moreover, as prior research has documented the positive link between students' SSB and character strength of kindness (e.g., Lee & Huang, 2021), a secondary aim of the current study was to examine the association between the identified SSB profile membership and character strength of kindness (i.e., motivation to be kind, recognition of kindness, and kind behaviours). LPA allows for the investigation of how different dimensions of SSB work together in relation to students' character strength of kindness.

Method

Participants

This study was part of a larger project conducted in 2018 that investigated students' perceptions of school environment and well-being (e.g., Lee & Huang, 2021). It recruited 1,173 participants from 34 local primary schools in Hong Kong. Of these, 49.7% of students were female. The participants were between the ages of 10 and 12 (Primary 4 [P4], $N = 441$, 37.6%; P5, $N = 372$, 31.7%; P6, $N = 355$, 30.3%).

Instruments

Sense of school belonging (SSB). Students' SSB was assessed using the 18-item PSSM scale (Goodenow, 1993) measured on a 4-point Likert scale (1 = *Never*, 2 = *Sometimes,* 3 = *Often,* 4 = *Always*). The negatively worded items (i.e., items 3, 6, 9, 12, and 16) were reverse-coded so that higher scores reflected higher levels of SSB. Cheung and Hui (2003) validated the PSSM scale in the Hong Kong context, and identified two factors (i.e., school belonging and feeling of rejection). Example items include, "I feel like a real part of this school", "People at this school are friendly to me", and "It is hard for people like me to be accepted here" (p. 84). In this study, the PSSM scale demonstrated good reliability ($\alpha = 0.83$).

Character strength of kindness. The scale of character strength of kindness, developed by Otake et al. (2006), was used in this study. The scale includes three items on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) and measures three dimensions of kindness: (a) motivation to be kind (i.e., "I am always thinking that I wish to be kind and help other people in daily life"; p. 365), (b) recognition of kindness (i.e., "I recognize that I always do kind behaviors and help other people in daily life"; p. 365), and (c) kind behaviors (i.e., "I do kind things and help others every day"; p. 365). Cronbach's alpha was 0.81, indicating good reliability.

Data Analysis

In this study, we first conducted LPA to determine the optimal number of SSB profiles among Hong Kong primary students. Multiple fit indices were used, including the Akaike information criterion (AIC), the Bayesian information criterion (BIC), the sample-size adjusted BIC (SSA-BIC), entropy, the Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR), the Lo-Mendell-Rubin adjusted likelihood ratio test (LRT), and the bootstrapped likelihood ratio test (BLRT; Akaike, 1973; Nylund et al., 2007; Sakamoto et al., 1986; Schwarz, 1978; Sclove, 1987). Second, we conducted equality of means tests to examine possible differences in students' motivation to be kind, their recognition of kindness, and their kind behaviours across the identified profiles.

Results

Latent Profile Analysis

In this study, LPA was used for the sample of Hong Kong primary students to identify different subgroups of primary students based on their SSB. Descriptive Statistics are summarized in Table 3.1. Following the guidelines developed by Nylund et al. (2007), beginning with a one-profile model, a series of iterative models was tested to determine the optimal model. The fit statistics for possible latent profile models are shown in Table 3.2. The first nonsignificant VLMR and LRT occurred with the seven-profile model ($p_{\text{VLMR}} = 0.48$, $p_{\text{LRT}} = 0.48$), suggesting that the seven-profile model did not show a better fit than the six-profile model based on the VLMR and LRT tests. Although the AIC, BIC, and SSA–BIC continued improving (i.e., decreasing) from the one- to the seven-profile model, the improvement from the six-profile model to the seven-profile model tended to be much smaller. Furthermore, in terms of classification accuracy, the entropy value of the six-profile model (0.89) was slightly higher than that of the seven-profile model (0.88), although the three-profile model had the highest entropy value (0.92). Therefore, the six-profile model was retained.

An indicator plot for the six-profile model is shown in Fig. 3.1. Table 3.3 presents the mean scores of each indicator across the six identified profiles. Based on Cheung and Hui's (2003) study, in which two factors (i.e., SSB and feelings of rejection) were identified, the results of this study revealed that students had different levels of scores on the items measuring the two factors identified in Cheung and Hui's (2003) study. For instance, some students had high scores for the items assessing SSB but low scores for the items measuring feelings of rejection. Thus, these two factors were adopted to label the different identified subgroups of primary students in this study.

The students in Profile 1 ($N = 65$, 5.6%) showed low levels of SSB and moderate levels of feelings of rejection. Accordingly, this profile was labelled *Low SSB and*

Table 3.1 Descriptive statistics

	1	2	3	4	5	6	7	8	9	10
1. PSSM1										
2. PSSM2	0.54**									
3. PSSM3	−0.16**	−0.06*								
4. PSSM4	0.45**	0.48**	−0.03							
5. PSSM5	0.42**	0.47**	0.03	0.47**						
6. PSSM6	−0.20**	−0.10**	0.58**	−0.06*	−0.08**					
7. PSSM7	0.39**	0.36**	−0.02	0.39**	0.41**	−0.03				
8. PSSM8	0.48**	0.41**	−0.15**	0.48**	0.41**	−0.14**	0.41**			
9. PSSM9	−0.21**	−0.13**	0.55**	−0.11**	−0.17**	0.61**	−0.12**	−0.20**		
10. PSSM10	0.34**	0.41**	−0.02	0.36**	0.31**	−0.01	0.31**	0.33**	−0.04	
11. PSSM11	0.49**	0.46**	−0.17**	0.44**	0.39**	−0.17**	0.36**	0.56**	−0.24**	0.38**
12. PSSM12	0.01	0.09**	0.26**	0.04	0.03	0.28**	0.05	−0.03	0.28**	0.04
13. PSSM13	0.49**	0.42**	−0.07*	0.45**	0.39**	−0.07*	0.46**	0.46**	−0.13**	0.31**
14. PSSM14	0.47**	0.38**	−0.18**	0.39**	0.40**	−0.18**	0.38**	0.49**	−0.26**	0.32**
15. PSSM15	0.45**	0.48**	−0.09**	0.44**	0.50**	−0.14**	0.38**	0.44**	−0.17**	0.33**
16. PSSM16	−0.18**	−0.09**	0.48**	−0.05	−0.04	0.54**	−0.08**	−0.18**	0.52**	0.01
17. PSSM17	0.46**	0.40**	−0.11**	0.40**	0.41**	−0.11**	0.41**	0.46**	−0.19**	0.35**
18. PSSM18	0.41**	0.46**	0.02	0.53**	0.47**	0.02	0.38**	0.43**	−0.05	0.33**

(continued)

Table 3.1 (continued)

	1	2	3	4	5	6	7	8	9	10
19. KIND1	0.34**	0.27**	−0.08**	0.22**	0.26**	−0.05	0.22**	0.26**	−0.11**	0.21**
20. KIND2	0.33**	0.28**	−0.03	0.25**	0.28**	−0.03	0.20**	0.25**	−0.06*	0.21**
21. KIND3	0.36**	0.32**	−0.05	0.29**	0.30**	−0.01	0.24**	0.28**	−0.04	0.22**
Mean	3.12	2.78	1.74	2.64	2.47	1.81	2.49	2.95	1.89	2.83
SD	0.89	0.96	1.00	0.89	0.92	1.13	1.11	0.90	1.00	0.96

	11	12	13	14	15	16	17	18	19	20	21
1. PSSM1											
2. PSSM2											
3. PSSM3											
4. PSSM4											
5. PSSM5											
6. PSSM6											
7. PSSM7											
8. PSSM8											
9. PSSM9											
10. PSSM10											
11. PSSM11											
12. PSSM12	−0.03										
13. PSSM13	0.43**	0.05									
14. PSSM14	0.52**	0.01	0.46**								

(continued)

Table 3.1 (continued)

	11	12	13	14	15	16	17	18	19	20	21
15. PSSM15	0.45**	0.02	0.45**	0.44**							
16. PSSM16	−0.18**	0.25**	−0.16**	−0.19**	−0.13**						
17. PSSM17	0.39**	0.03	0.49**	0.46**	0.43**	−0.18**					
18. PSSM18	0.42**	0.11**	0.46**	0.34**	0.43**	−0.02	0.48**				
19. KIND1	0.29**	−0.01	0.25**	0.28**	0.24**	−0.11**	0.28**	0.26**			
20. KIND2	0.31**	0.01	0.28**	0.29**	0.29**	−0.07*	0.24**	0.25**	0.55**		
21. KIND3	0.33**	0.02	0.34**	0.31**	0.32**	−0.01	0.28**	0.30**	0.51**	0.69**	
Mean	2.99	2.34	2.83	3.06	2.80	1.89	2.72	2.58	4.18	3.71	3.79
SD	0.93	1.03	0.96	0.87	0.92	1.08	1.02	0.92	0.87	0.90	0.93

Note PSSM = The psychological sense of school membership scale, KIND = Character strength of kindness, *SD* = Standard deviation
* $p < 0.05$
** $p < 0.01$

Table 3.2 Model fit indices for the latent profile analysis of sense of school belonging

	Number of profiles						
	1 Profile	2 Profiles	3 Profiles	4 Profiles	5 Profiles	6 Profiles	7 Profiles
AIC	57,779.74	53,625.28	52,040.80	50,931.26	50,406.58	49,998.06	49,827.47
BIC	57,962.05	53,903.79	52,415.53	51,402.20	50,973.73	50,661.43	50,587.06
SSA-BIC	57,847.70	53,729.09	52,180.48	51,106.80	50,617.98	50,245.33	50,110.61
Entropy	/	0.87	0.92	0.89	0.90	0.89	0.88
VLMR	/	0.00	0.00	0.00	0.00	0.00	0.48
LRT	/	0.00	0.00	0.00	0.00	0.00	0.48
BLRT	/	0.00	0.00	0.00	0.00	0.00	0.00
Smallest n	/	527 (45.1%)	178 (15.2%)	174 (14.9%)	48 (4.1%)	49 (4.2%)	50 (4.3%)

Note AIC = Akaike information criterion, BIC = Bayesian information criterion. SSA-BIC = sample-size adjusted BIC, VLMR = Vuong-Lo-Mendell-Rubin likelihood ratio test, LRT = Lo-Mendell-Rubin adjusted likelihood ratio test, BLRT = bootstrapped likelihood ratio test

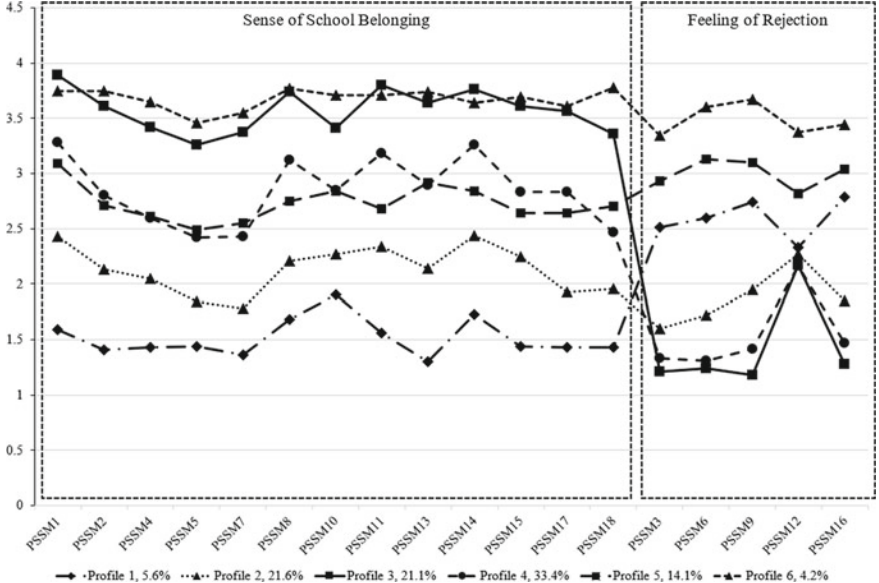

Fig. 3.1 Latent profile analysis plot of sense of school belonging

Moderate Rejection. The students in Profile 2 were observed to have average scores for SSB and feelings of rejection ($N = 252$, 21.6%), so the profile was named *Moderate SSB and Moderate Rejection.* Profile 3 was labelled *High SSB and High Rejection* ($N = 247$, 21.1%), as these students reported extremely high levels of both SSB and feelings of rejection. Profile 4, labelled *High-Moderate SSB and High Rejection*, was the most common profile ($N = 391$, 33.4%). Students in this profile exhibited high to moderate levels of SSB and high levels of feelings of rejection. Profile 5 was named *High-Moderate SSB and Low-Moderate Rejection* ($N = 165$, 14.1%), because the students' scores for SSB were not as high as those in Profile 3 and 6 but were higher than those in Profile 2, and their scores for feelings of rejection were not as low as those in Profile 6 but were lower than those in Profiles 1 and 2. Profile 6 was the least common profile ($N = 49$, 4.2%) and was labelled *High SSB and Low Rejection*, as these students scored high for SSB and low for feelings of rejection.

SSB Profiles and Character Strength of Kindness

The relationship between SSB profiles and character strength of kindness was investigated. The results are presented in Table 3.4. The students from Profile 1 (3.79) were found to exhibit lower levels of motivation to be kind than those from Profiles 4 (4.24), 5 (4.65) and 6 (4.86). The students from Profile 2 (3.79) were found to have lower

Table 3.3 Characteristics of the identified profiles

Indicator variable	Mean						
	Profile 1 N = 65 (5.6%)	Profile 2 N = 252 (21.6%)	Profile 3 N = 247 (21.1%)	Profile 4 N = 391 (33.4%)	Profile 5 N = 165 (14.1%)	Profile 6 N = 49 (4.2%)	Total N = 1,169
PSSM1	1.59	2.43	3.89	3.28	3.09	3.75	3.12
PSSM2	1.41	2.13	3.61	2.80	2.71	3.75	2.78
PSSM4	1.43	2.05	3.42	2.60	2.61	3.65	2.64
PSSM5	1.44	1.84	3.26	2.42	2.49	3.46	2.47
PSSM7	1.36	1.78	3.37	2.43	2.55	3.55	2.49
PSSM8	1.68	2.21	3.74	3.12	2.75	3.77	2.95
PSSM10	1.90	2.27	3.41	2.85	2.84	3.71	2.83
PSSM11	1.56	2.34	3.80	3.18	2.68	3.71	2.99
PSSM13	1.30	2.14	3.64	2.89	2.92	3.74	2.83
PSSM14	1.73	2.44	3.76	3.26	2.84	3.64	3.06
PSSM15	1.44	2.25	3.61	2.83	2.64	3.69	2.80
PSSM17	1.43	1.93	3.56	2.83	2.64	3.61	2.72
PSSM18	1.43	1.96	3.36	2.47	2.70	3.78	2.58
PSSM3	2.51	1.60	1.21	1.33	2.93	3.34	1.74
PSSM6	2.60	1.72	1.24	1.31	3.13	3.60	1.81
PSSM9	2.74	1.95	1.18	1.42	3.10	3.67	1.89
PSSM12	2.33	2.27	2.17	2.16	2.82	3.37	2.34
PSSM16	2.79	1.85	1.28	1.47	3.04	3.44	1.89

Note PSSM = The psychological sense of school membership scale

levels of motivation to be kind than those from Profiles 4 (4.24), 5 (4.65) and 6 (4.86). The students from Profile 3 (3.98) were found to have lower levels of motivation to be kind than those from Profiles 4 (4.24), 5 (4.65) and 6 (4.86). The students from Profile 4 (4.24) were found to have lower levels of motivation to be kind than those from Profiles 5 (4.65) and 6 (4.86). The students from Profile 5 (4.65) were found to have lower levels of motivation to be kind than those from Profile 6 (4.86). However, there were no significant differences in Hong Kong primary students' motivation to be kind between Profiles 1 (3.79), 2 (3.79) and 3 (3.98).

In terms of their recognition of kindness, the students from Profile 1 (3.20) were found to exhibit lower levels than those from Profiles 3 (3.64), 4 (3.77), 5 (4.15) and 6 (4.41). The students from Profile 2 (3.30) were found to have lower levels of recognition of kindness than those from Profiles 3 (3.64), 4 (3.77), 5 (4.15) and 6 (4.41). The students from Profile 3 (3.64) were found to have lower levels of kindness recognition than those from Profiles 5 (4.15) and 6 (4.41). The students from Profile 4 (3.77) were found to have lower levels of kindness recognition than those from 5 (4.15) and 6 (4.41). The students from Profile 5 (4.15) were found to have lower

Table 3.4 Equality tests of mean across profiles

	Motivation to be kind	Recognition of kindness	Kind behaviours
Overall test	269.04***	180.01***	265.55***
Profile 1 versus 2	0.00	0.68	0.52
Profile 1 versus 3	1.16	10.18**	16.69***
Profile 1 versus 4	7.13**	21.36***	22.69***
Profile 1 versus 5	26.38***	57.42***	61.77***
Profile 1 versus 6	38.99***	57.36***	98.30***
Profile 2 versus 3	3.78	11.25**	24.92***
Profile 2 versus 4	31.47***	34.31***	41.66***
Profile 2 versus 5	132.38***	112.43***	131.80***
Profile 2 versus 6	170.15***	75.10***	171.55***
Profile 3 versus 4	8.43**	1.89	0.25
Profile 3 versus 5	60.70***	29.31***	27.85***
Profile 3 versus 6	88.35***	30.87***	63.90***
Profile 4 versus 5	35.86***	26.00***	31.55***
Profile 4 versus 6	72.04***	27.82***	77.13***
Profile 5 versus 6	8.20**	4.33*	16.73***
Summary	Profile 1 < Profile 4 < Profile 5 < Profile 6; Profile 2 < Profile 4 < Profile 5 < Profile 6; Profile 3 < Profile 4 < Profile 5 < Profile 6	Profile 1 < Profile 3 < Profile 4 < Profile 5 < Profile 6; Profile 2 < Profile 3 < Profile 5 < Profile 6; Profile 2 < Profile 4 < Profile 5 < Profile 6	Profile 1 < Profile 3 < Profile 4 < Profile 5 < Profile 6; Profile 2 < Profile 3 < Profile 5 < Profile 6; Profile 2 < Profile 4 < Profile 5 < Profile 6

Note *p < 0.05, **p < 0.01, ***p < 0.001

levels of kindness recognition than those from Profile 6 (4.41). However, there were no significant differences in Hong Kong primary students' recognition of kindness between Profile 1 (3.20) and Profile 2 (3.30), and between Profile 3 (3.64) and Profile 4 (3.77).

With regard to kind behaviours, the students from Profile 1 (3.20) were found to exhibit lower levels than those from Profiles 3 (3.79), 4 (3.84), 5 (4.28) and 6 (4.70). The students from Profile 2 (3.30) were found to have lower levels of kind behaviours than those from Profiles 3 (3.79), 4 (3.84), 5 (4.28) and 6 (4.70). The students from Profile 3 (3.79) were found to have lower levels of kind behaviours than those from Profiles 5 (4.28) and 6 (4.70). The students from Profile 4 (3.84) were found to have lower levels of kind behaviours than those from Profiles 5 (4.28) and 6 (4.70). The students from Profile 5 (4.28) were found to have lower levels of kind behaviours than those from Profile 6 (4.70). However, there were no significant differences in Hong Kong primary students' kind behaviours between Profile 1 (3.20) and Profile 2 (3.30), and between Profile 3 (3.79) and Profile 4 (3.84).

Discussion

This study aimed to identify profiles of students' SSB among Hong Kong primary students, and to investigate the relationship between the identified profile membership and character strength of kindness (i.e., motivation to be kind, recognition of kindness, and kind behaviours). LPA identified six SSB profiles: *Low SSB and Moderate Rejection*, *Moderate SSB and Moderate Rejection*, *High SSB and High Rejection*, *High-Moderate SSB and High Rejection*, *High-Moderate SSB and Low-Moderate Rejection*, and *High SSB and Low Rejection*. The findings of this study furnish empirical support for SSB profiles among primary students. The results demonstrated that students' SSB varied across profiles, extending previous work using variable-centred approaches. The profiles *Low SSB and Moderate Rejection*, *Moderate SSB and Moderate Rejection*, *High-Moderate SSB and Low-Moderate Rejection*, and *High SSB and Low Rejection* indicated that the students had different levels of SSB. Hong Kong primary students exhibited low, moderate, and high levels of SSB.

Interestingly, some students fell under the profiles *High SSB and High Rejection* and *High-Moderate SSB and High Rejection*, their scores yielding an unexpected inconsistency. It would have been assumed that high levels of SSB would typically appear in students who also experienced low levels of feelings of rejection; however this was not the case for students from these two profiles. For instance, students in the *High SSB and High Rejection* profile had high levels of school belonging but also high levels of feelings of rejection. One possible explanation for this apparent contradiction is that the measurement of SSB was based on internal perceptions and identity, whereas the measurement of feelings of rejection was based on students' perceptions of their external relationships with their teachers and peers. For instance, some students might believe that they are still one part of the school community or school

culture, even though they feel rejected by some peers and teachers. Another explanation is that items measuring SSB were positively worded, whereas items measuring feelings of rejection were negatively worded. This may have led to a method effect. Prior research has demonstrated negative wording effects in the factorial structure of scales that include negatively worded items (DiStefano & Motl, 2006).

To some extent, these findings support past evidence indicating the multidimensionality of SSB (e.g., Cheung & Hui, 2003; Hagborg, 1994; You et al., 2011). Hagborg (1994) identified three factors of school membership: belonging, rejection and acceptance. Rejection is based on the assessment of 'feelings of personal acceptance of classmates' (p. 319). Harter (1989) argued that the extent of acceptance, rejection and belonging could be understood as a result of mixed interconnections between individual students' self-concept and the school climate. In another study examining the latent structure of the PSSM scale, You et al. (2011) found three dimensions of SSB, namely perceptions of caring adult relationships, acceptance or belongingness at school, and disrespect or rejection, the last of which could involve either peers or adults in school (p. 233).

Another aim of the current study was to investigate differences in students' character strength of kindness across the SSB profiles. The results of profile differences in character strength of kindness between the profiles *Low SSB and Moderate Rejection*, *Moderate SSB and Moderate Rejection*, *High-Moderate SSB and Low-Moderate Rejection,* and *High SSB and Low Rejection* indicated a positive relationship between SSB and character strength of kindness. Specifically, the students from Profile 6 (*High SSB and Low Rejection*) had the highest levels of motivation to be kind, recognition of kindness, and kind behaviour, followed by those in Profiles 5 (*High-Moderate SSB and Low-Moderate Rejection*) and 2 (*Moderate SSB and Moderate Rejection*). The students from Profile 1 (*Low SSB and Moderate Rejection*) had the lowest levels of motivation to be kind, recognition of kindness, and kind behaviour. These results are in line with prior empirical evidence regarding the positive link between SSB and character strength of kindness (Lee & Huang, 2021), and the relationship between SSB and prosocial behaviour (Demanet & van Houtte, 2012; Lonczak et al., 2002). Interestingly, the students from Profile 3 (*High SSB and High Rejection*) had similar levels of SSB with the students from Profile 5 (*High-Moderate SSB and Low-Moderate Rejection*), but had much higher levels of feelings of rejection than the students in Profile 5. The results also indicated that the students in Profile 3 had lower levels of motivation to be kind, recognition of kindness and kind behaviour than the students in Profile 5. Students' perceptions of feelings of rejection may have resulted in the difference. It may be the case that when students perceive themselves to be rejected by others at school, they are less likely to be motivated to be kind, to recognise kindness from others, or to behave kindly to other people within the school community. As Hong Kong is influenced by Chinese-heritage culture and is collectivist rather than individualistic, students may be more sensitive to poorly disciplined peers and to negative feedback from teachers. This in turn may make them feel less connected to their teachers and peers (Chiu & Chow, 2015; Chiu et al., 2012, 2016).

These findings indicate that schools and teachers may be able to develop students' SSB according to the different student profiles. It is recommended that diverse SSB interventions and programmes could be applied to different subgroups of students based on individual school contexts. Helping students identify their SSB-related internal and external experiences is beneficial to improve SSB for particular students. In addition, as this study indicated the differences in character strength of kindness across students with distinctive SSB profiles, when developing kindness education programmes, an increased focus on helping students establish a sense of school belonging is one means of enhancing students' character strength of kindness, especially for those with low levels of motivation to be kind and acts of kindness.

Limitations and Future Research

This study has some limitations. First, because of the cross-sectional design of this study, the results did not allow conclusions to be drawn about any causal relationship between students' SSB and their character strength of kindness. Future studies could collect longitudinal data to explore whether such causal relationships exist. Second, the study limited its analysis to school belonging and kindness. Future studies could include an investigation of other variables related to students' well-being, academic, and affective outcomes (Wehlage et al., 1989). Moreover, qualitative studies or studies using a mixed-method design would allow for investigations of the study relationships in greater depth.

Conclusions

The current study aimed to identify latent profiles of SSB among Hong Kong primary students and explore the relationship between the identified SSB profile membership and character strength of kindness (i.e., motivation to be kind, recognition of kindness, and kind behaviours). Using LPA, six SSB profiles were identified: *Low SSB and Moderate Rejection, Moderate SSB and Moderate Rejection, High SSB and High Rejection, High-Moderate SSB and High Rejection, High-Moderate SSB and Low-Moderate Rejection*, and *High SSB and Low Rejection.* Except for the students who exhibited consistently low, moderate, and high levels of SSB and feelings of rejection, two contradictory profiles in which the students showed inconsistent levels of SSB and feelings of rejection emerged. Furthermore, the results indicated differences in character strength of kindness across the identified SSB profiles. The findings are in line with the view that school environment plays an important role in students' social-emotional development, and highlight the necessity for a greater emphasis on school intervention programs on building students' SSB and enhancing their character strength of kindness.

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Chapter 4
Feedback Orientation and Learning-Related Academic Emotions: An Exploratory Study in Filipino University Students

Cherry E. Frondozo and Lan Yang

Abstract Although students' interpretations and emotional reactions to teacher feedback could influence how students apply teacher feedback to improve performance, these cognitive and emotional processes remain understudied. Pekrun's control-value theory posits that students' perceptions of their capability (control) and the usefulness of the academic task (value) could influence students' academic emotions. This study examined how students' feedback perceptions influence their positive (joy, hope, and pride) and negative (hopelessness, boredom, shame, anger, and anxiety) learning-related emotions. We examined the four aspects of feedback perceptions through a construct called feedback orientation. Specifically, they are feedback self-efficacy (perceived capability to use feedback), feedback social awareness (perceived social value of feedback), feedback accountability (perceived responsibility for using feedback), and feedback utility (perceived usefulness of feedback). A total of 112 Filipino university students (Female $n = 87$, 77%) completed the Feedback Orientation Scale and the Learning-related Academic Emotions Questionnaire. Results from a path analysis showed that the four dimensions of feedback orientation are positively correlated with joy and negatively correlated with anxiety and shame. A further path analysis revealed that feedback self-efficacy is the strongest predictor of positive emotions among the four dimensions. The results suggest that promoting students' feedback self-efficacy in using their teachers' feedback might be essential in fostering positive emotions in students' learning experiences.

Keywords Feedback perceptions · Feedback orientation · Learning-related emotions · Filipino university students

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Practitioner Points

- Although feedback is one of the most influences on achievement, the relationship between feedback and achievement might not be linear. In designing feedback, teachers should consider students' perspective on perceiving feedback in terms of utility, capability, and responsibility for using feedback to improve academic performance.
- Students' feedback perspectives influence their emotions while learning; hence teachers could promote greater openness to receiving feedback by emphasising the value of feedback and the student's sense of capability in applying feedback.
- A student's perceived capability of using feedback significantly impacts their emotions while learning. Hence, teachers could provide feedback by considering a student's sense of capability of feedback uptake to promote positive emotions and reduce negative emotions while processing feedback to enhance learning.

Teacher feedback has a large effect on student learning and achievement (Hattie, 2015; Hattie & Timperley, 2007); however, students generally do not seek feedback (Ferguson, 2011), and fail to use feedback effectively (Carless, 2006). Students' lack of feedback literacy, or the ability to use feedback effectively, has been a growing concern among educators (Sutton, 2012; Yang, 2022). Hence, researchers have tried bridging this 'feedback gap' between teachers' intentions and students' interpretations (Evans, 2013). Feedback literacy may be strengthened by developing students' appreciation of the value of feedback, their capability to respond, and their emotional reactions to feedback (Carless & Boud, 2018). Increasingly, models on feedback literacy attempt to explain how these underlying factors influence students' response to and use of feedback (Carless & Boud, 2018; Chong, 2019; Wood, 2020). However, these models do not explain the influence of teacher feedback practices on students' receptivity to feedback and their emotional responses to these assessment situations.

This chapter will focus on whether students' perceptions of teachers' feedback influence their learning-related emotions. Feedback is defined by Boud and Molloy (2013) as "a process whereby learners obtain information about their work in order to appreciate the similarities and differences between the appropriate standards for any given work, and the qualities of the work itself, in order to generate improved work" (p. 6). However, feedback is not just a one-way transmission of information from the teacher to the student. Students are also actively interpreting and reacting to the feedback they receive. Molloy et al., (2013) commented, "emotion is an important dimension in the seeking, giving, receiving and use of feedback" (p. 22). Students' emotional responses to feedback is influenced by the perceived personal support they receive from teachers (Dowden et al., 2013). One narrative inquiry study revealed that teachers' feedback influences students' beliefs about themselves as learners and that these beliefs are associated with anxiety or confidence in accomplishing the task (Shields, 2015). Students with outstanding psychological capital in school were more likely to seek feedback because they recognized the value of teacher feedback (Wang et al., 2017). In examining the impact of feedback on students' multiple indicators of positive education, the existing literature shows feedback matters to students'

instrumental and intrinsic motivation (Hamidun et al., 2012; Sallang & Ling, 2019), academic emotions (Han & Hyland, 2019; Mahfoodh, 2017), and learning engagement (Zhang & Hyland, 2018; Zheng & Yu, 2018), and even students' perceptions of classroom environment (Burnett, 2002). However, these studies have not yet considered the role of students' perceptions of feedback in affecting students' emotions in learning. This chapter will examine whether students' receptivity to feedback (known as feedback orientation) is associated with positive and negative emotions in learning situations.

Feedback Orientation

Feedback orientation, a term coined in human resources literature, refers to an individual's openness to feedback through effectively receiving, interpreting, and using feedback to improve performance (London & Smither, 2002). Hence, individuals with higher feedback orientation could also be construed as more feedback literate. London and Smither (2002) identified four dimensions of feedback orientation. These are feedback utility, feedback social awareness, feedback accountability, and feedback self-efficacy. Feedback utility refers to the perceived usefulness of teachers' feedback to improve performance (London & Smither, 2002; Yang & Yang, 2018). Feedback social awareness refers to the student's intention to use teacher feedback to maintain or establish social relationships (London & Smither, 2002; Yang & Yang, 2018). Feedback self-efficacy refers to students' perceived competence to manage the feedback from their teachers (London & Smither, 2002; Yang & Yang, 2018). Finally, feedback accountability refers to a student's autonomy in using teacher feedback by taking strong personal responsibility to respond (London & Smither, 2002; Yang & Yang, 2018).

Given that feedback orientation influences students' use of feedback, a person who is more receptive to feedback could feel more positive emotions, even when faced with negative feedback. The control-value theory (Pekrun, 2006) could explain this fundamental hypothesis.

Control-Value Theory

The control-value theory posits that students' perception of the usefulness of academic tasks (value appraisal) and their perceived level of competence in accomplishing the task (control appraisal) influences their emotions in achievement-related outcomes or activities (academic emotions) (Pekrun et al., 2007). These academic emotions include positive (joy, hope, pride) and negative (anger, fear, hopelessness, boredom, anxiety, and shame) emotions and could arise in assessment, learning, or studying contexts (Pekrun et al., 2007). Although feedback orientation has not been specified within the theory, Pekrun (2000) recognizes that teacher feedback gives

information on the success and failure of a task, which could bring about academic emotions such as joy, disappointment, pride, or shame.

In the control-value theory, feedback has been listed as one of the factors in the environmental part affecting students' appraisals (control and values), which influence academic emotions, which in turn influence learning outcomes (Pekrun, 2006, p. 328). Pekrun (2006) also assumed that feedback may directly influence students' retrospective appraisals of achievement outcomes. However, students' perceptions of feedback have not yet been considered in understanding the effect of feedback on students' achievement outcomes. Feedback orientation could be situated within the control-value theory as control and value appraisals. Feedback utility and social awareness could be construed as value appraisals since they pertain to students' perceptions of the usefulness of feedback in producing improved work and as a means to manage their relationship with their teachers when using feedback. Feedback self-efficacy could be construed as a control appraisal since it represents the students' belief in their capability to execute the feedback. Although feedback accountability is not specifically included as either a control or value appraisal, previous studies have suggested that one's sense of accountability to act upon feedback could also have emotional outcomes, since students' perception of having internal control and agency within the feedback process has been associated with positive emotions when seeking feedback (Molloy et al., 2019a, 2019b).

Previous research identified feedback perceptions are associated with different academic emotions (Yang, 2019). Students who doubted the accuracy of their teachers' feedback reported distress and disappointment when receiving feedback (Sargeant et al., 2008). Another study found that students reported enjoyment even while receiving constructive feedback when they felt the feedback could help them improve their performance (Fong et al., 2018). Students felt shame after receiving constructive feedback when they felt they had failed but may also feel shame when receiving positive feedback when they thought it was undeserved (Fong et al., 2018).

These studies suggest that students' perceptions of feedback could influence their emotional reactions to the feedback they receive. These emotional reactions are not merely caused by the kind of feedback that the teacher delivered but are brought about by students' interpretations of the feedback. Students who are more open and receptive to feedback would have more positive perceptions of feedback, which may lead to more positive emotions toward receiving feedback. These positive academic emotions would lead to more adaptive learning outcomes for students. According to Fredrickson (2001), positive emotions broaden the mind to find solutions, look at situations more objectively, and increase one's personal resources to deal with negative events. Hence, students with positive academic emotions would be more likely to seek feedback and approach negative feedback to look for solutions to improve.

Philippine Context

This study was conducted in the Philippines, where assessment in higher education research is rarely studied. Assessment research in this context has focused mainly on teaching practices, focusing little on the emotional consequences of teachers' feedback. According to the Gallup report, Filipinos rank as one of the most emotional people in the world, experiencing a wide range of positive and negative emotions (Romero, 2019). A qualitative study found that Filipino learners used 1337 words to describe their emotions while learning (Bernardo et al., 2009). Consistent with the literature, academic emotions were also associated with different learning outcomes. Shame was associated with decreased academic achievement (Villavicencio & Bernardo, 2013a). Curious and motivated Filipino students also report more enjoyment, hope, and pride in class-related situations (Ouano, 2009). Positive emotions were also associated with increased students' engagement and subjective well-being (Datu & King, 2016; King & Gaerlan, 2014).

According to Cagasan et al. (2020), the Philippines' collectivism, large power distance and high uncertainty avoidance may influence the classroom context, such that teachers are expected to have all the answers and students are expected to speak up in class only when initiated by the teacher. Students are also not expected to contradict teachers to maintain social harmony. Maintaining social harmony is essential since Filipino students' motivation to study are also socially oriented (Datu & Bernardo, 2020; King & Mendoza, 2021). Hence, students may value teacher feedback in terms of facilitating and maintaining social relationships with the teacher. Despite valuable and unique contributions from these previous studies to understanding Filipino students' emotions and motivation, there is a lack of research on examining how Filipino students' emotions in learning are related to their perceptions of teacher feedback. Teacher feedback has been documented as an essential part of formative assessment in higher education (Bailey & Garner, 2010; Winstone & Carless, 2019), affecting students' engagement and achievement (Gravett & Winstone, 2019; Winstone et al., 2017).

Overview of the Current Study

This study explores the association between students' feedback orientation and their subsequent emotions in school.

The study aims to answer the following questions:

1. Are the four dimensions of feedback orientation positively associated with positive emotions and negatively associated with negative emotions?
2. Is each dimension of feedback orientation significantly associated with specific positive and negative emotions?

We hypothesize that the four dimensions of feedback orientation will be positively associated with positive emotions and negatively associated with negative emotions

(H1). We also hypothesize that the four dimensions of feedback orientation will be positively associated with positive emotions of enjoyment, hope, and pride and negatively associated with negative emotions (anger, anxiety, shame, hopelessness, and boredom) (H2).

Significance of the Study

This study has theoretical and practical significance. First, this study contributes to feedback literature which mainly focuses on promoting feedback literacy through focusing on the pedagogical perspective with an emphasis on teacher feedback practices (Hattie & Timperley, 2007; Wood, 2020) and feedback perceptions of specific teachers' feedback (Dahling et al., 2017; Goel & Ellis, 2013). Focusing on understanding students' multi-dimensional feedback orientation (e.g., feedback utility, feedback self-efficacy, feedback accountability) rather than a general perception of teachers' feedback practices could shed light on understanding the impact of individual differences on students' final readiness and willingness (i.e., feedback receptivity) to uptake teacher feedback in performance and learning improvement. Based on this, researchers and practitioners could design enhancement activities/ interventions for students' feedback literacy in more feasible and productive ways (Yang, 2022; Yang et al., 2022) than the current research status broadly emphasizing feedback literacy (Sutton, 2012). Secondly, this study contributes to the existing literature on control-value theory by extending its application for understanding the relationships between students' feedback orientation and learning-related emotions. Feedback is essential to instruction (Hattie, 2009; Winstone & Carless, 2019). Feedback affects students' emotions (Molloy et al., 2013). However, studies that focus on examining the links between how students perceive teacher feedback and how they feel in learning situations are sparse (Yang et al., 2014; Yang & Yang, 2018). Understanding the association of feedback perceptions to learning-related academic emotions could help shed light on how teacher feedback, even with constructive criticism, could be tailored to increase positive emotions and motivation to study.

This study also includes practical significance. Teachers could increase their feedback literacy by understanding how different dimensions of feedback orientation are related to academic emotions (Molloy et al., 2019a, 2019b). Teachers' feedback practices over time could influence students' openness to feedback (Linderbaum & Levy, 2010), and maintaining a trusting relationship with students promotes students' openness to feedback (Abraham & Singaram, 2021; Dahling et al., 2015). Hence, understanding how different dimensions of feedback orientation could enhance learning-related positive emotions could shed light on how teachers may adjust their feedback practices to enhance different dimensions of feedback orientation among students.

Method

Participants and Procedure

We recruited 112 undergraduate students from three private universities in the Philippines. These students were 17–21 years old and 87 (77%) were female. Most of them ($N = 97$, 86%) were first-year undergraduate students, followed by 11 (9.8%) second-year undergraduate students.

The students were recruited through a link provided by the researcher through a faculty member in each participating university. Students provided their informed consent before participating. Students were informed that the survey was voluntary and would not impact their academic results in any way.

Measures

Feedback Orientation Scale

The Feedback Orientation Scale initially developed by Linderbaum and Levy (2010) in organizational psychology and validated by Yang et al. (2014) and Yang and Yang (2018) in educational settings was administered to measure the students' perception of feedback. The scale consisted of 20 items, with 5 items measuring each dimension of feedback orientation. These dimensions included feedback utility (FBUT), feedback accountability (FBAT), feedback self-efficacy (FBSE), and feedback social awareness (FBSO). Feedback utility pertains to the perceived usefulness of teacher feedback; a sample item includes "I find that feedback is critical for reaching my learning goals". Feedback accountability (FBAT) pertains to the perceived responsibility towards seeking and using teacher feedback. A sample item includes "*If my teacher gives me feedback, it is my responsibility to respond to it.*" Feedback self-efficacy (FBSE) refers to the perceived capability to work on the feedback. A sample item in this subscale is "*I know I can handle the feedback I receive.*" Finally, feedback social awareness (FBSO) refers to the perceived social value of using feedback. A sample item in this scale is "*Using feedback, I am more aware of what teachers think of me.*". The scales have been shown to have external validity with school engagement (Yang, 2016; Yang & Yang, 2018) and learning goals (Yang et al., 2014). In this study, the total scale of feedback orientation had adequate reliability (Cronbach's $\alpha = 0.884$), and the subscales also had adequate reliability (Table 4.1). All items were measured on a 5-point Likert scale with items from 1 (strongly disagree) to 5 (strongly agree). The confirmatory factor analysis confirmed the construct validity of the four-factor structure model of the Feedback Orientation Scale (CFI = 0.946, TLI = 0.928, RMSEA = 0.062 with 90% CI = [0.037, 0.083], SRMR = 0.075).

Table 4.1 Means, standard deviations, and the Cronbach's alpha of the study variables

	M	SD	α
1. Feedback self-efficacy	3.585	0.708	0.883
2. Feedback utility	4.011	0.594	0.781
3. Feedback social awareness	3.874	0.740	0.885
4. Feedback accountability	3.873	0.531	0.756
5. Enjoyment	3.505	0.509	0.691
6. Hope	3.259	0.596	0.757
7. Pride	3.237	0.532	0.581
8. Hopelessness	2.143	0.578	0.679
9. Boredom	2.408	0.617	0.711
10. Anger	1.688	0.542	0.724
11. Anxiety	2.321	0.649	0.710
12. Shame	2.414	0.725	0.738
13. Overall positive emotions	3.333	0.471	0.850
14. Overall negative emotions	2.195	0.450	0.855

Short-Form Learning-Related AEQ (SF-LAEQ, 24 Items; Yang, 2018; Yang & Sin, 2013)

The SF-LAEQ measures academic emotions while learning in school. Participants respond to items that measure the eight learning-related academic emotions (enjoyment, hope, pride, hopelessness, boredom, anger, anxiety, and shame). Items are rated on a scale of 1 = strongly disagree to 4 = strongly agree. A sample item includes "I enjoy acquiring new knowledge". We found the scales have adequate reliability (Table 4.1).

Statistical Analysis

We performed two steps of statistical analysis. First, we conducted confirmatory factor analysis (CFA) to examine the 4-factor structure of the Feedback Orientation Scale documented in previous research (e.g., Yang et al., 2014; Yang & Yang, 2018). The confirmatory factor analysis confirmed the construct validity of the four-factor structure model of the Feedback Orientation Scale (CFI = 0.946, TLI = 0.928, RMSEA = 0.062 with 90% CI = [0.037, 0.083], SRMR = 0.075). Secondly, we used path analysis to test the association between the four dimensions of feedback orientation and the eight academic emotions. We used path analysis because it allows the examination of the relationships between multiple independent and dependent variables simultaneously and identifies the significant paths (Lleras, 2006) while controlling for shared variance among the set of variables in a single model. We

tested two models. Model 1 tested the association of the four dimensions of feedback orientation with positive and negative emotions. In comparison, Model 2 tested the association of the four dimensions of feedback orientation with individual academic emotions: joy, hope, pride, shame, anger, anxiety, hopelessness, and boredom.

We used the following fit indices and criteria to evaluate the model: chi-square (χ^2); standard root mean square residual (SRMR): <0.09 showing reasonable fit (Hu & Bentler, 1999); comparative fit index (CFI): >0.90 and >0.95 as acceptable and good fit (Bryne, 2010), and Tucker-Lewis index (TLI): with >0.90 and >0.95 indicating acceptable and good fit (Bryne, 2010), and root mean square error of approximation (RMSEA): <0.08 and <0.05 indicating acceptable and good fit (Browne & Cudeck, 1992). We used Mplus Version 8.3 (Muthén & Muthén, 2019) to analyse the two models, with robust maximum likelihood (MLR) as the estimator.

Results

Table 4.1 summarises the variables' correlations. Feedback utility significantly correlated with feedback social awareness and accountability, and both feedback utility and feedback self-efficacy significantly correlated with feedback accountability.

We performed path analysis to explore the relationships between the four dimensions of FO and general positive and negative emotions. The results showed that FBSO ($\beta = 0.238$, $p = 0.038$) and FBSE ($\beta = 0.285$, $p = 0.005$) significantly predicted positive emotions. FBSE was also a significant negative predictor of negative academic emotions ($\beta = -0.444$, $p < 0.001$), whereas FBSO was not found to be a significant predictor of negative academic emotions ($\beta = 0.105$, $p = 0.336$). FBUT was not found to be a significant predictor of positive emotions ($\beta = -0.123$, $p = 0.312$) and negative emotions ($\beta = -0.031$, $p = 0.785$). FAT was also not a significant predictor of positive emotions ($\beta = -0.147$, $p = 0.188$) and negative emotions ($\beta = 0.004$, $p = 0.970$). The four dimensions of feedback orientation explained 11.3% variance of positive emotions ($p = 0.071$) and significantly predicted 19.7% variance of negative emotions ($p = 0.007$). See also Fig. 4.1.

We also conducted a secondary path analysis to examine the relationships between the four dimensions of FO and specific emotions to test Model 2. Results showed that FBSE was a positive predictor of enjoyment ($\beta = 0.197$, $p = 0.063$), hope ($\beta = 0.309$, $p = 0.003$), and pride ($\beta = 0.202$, $p = 0.050$), and was a significant negative predictor of hopelessness ($\beta = -0.405$, $p < 0.0001$), boredom ($\beta = -0.243$, $p = 0.024$), anger ($\beta = -0.216$, $p = 0.038$), anxiety ($\beta = -0.299$, $p = 0.003$), shame ($\beta = -0.438$, $p < 0.0001$). Consistent with those found in Model 1, FBSO was a significant and positive predictor of pride ($\beta = 0.315$, $p = 0.024$), while FBAT was a significant negative predictor of hope ($\beta = -0.264$, $p = 0.030$). Feedback utility was not found to be a significant predictor of enjoyment ($\beta = -0.002$, $p = 0.986$), hope ($\beta = -0.118$, $p = 0.338$), pride ($\beta = -0.174$, $p = 0.146$), hopelessness ($\beta = 0.057$, $p = 0.627$), boredom ($\beta = -0.011$, $p = 0.929$), anger ($\beta = -0.024$, $p = 0.845$), anxiety ($\beta = -0.062$, $p = 0.603$) and shame ($\beta = -0.048$, $p = 0.678$). Feedback social

Table 4.2 Correlations of the study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Feedback self-efficacy	–												
2. Feedback utility	0.441***	–											
3. Feedback social awareness	0.262***	0.738**	–										
4. Feedback accountability	0.275***	0.704***	0.452***	–									
5. Enjoyment	0.206*	0.103	0.120	0.075	–								
6. Hope	0.242*	−0.023	0.101	−0.142	0.631**	–							
7. Pride	0.172	0.013	0.236*	0.011	0.624**	0.605**	–						
8. Hopelessness	−0.330**	0.017	0.077	0.068	−0.034	−0.097	−0.006	–					
9. Boredom	−0.202	−0.046	0.044	−0.028	−0.045	−0.213*	−0.067	0.343**	–				
10. Anger	−0.252*	−0.076	0.069	−0.167	−0.147	−0.070	−0.007	0.392**	0.428**	–			
11. Anxiety	−0.313**	−0.139	−0.007	−0.109	0.019	−0.057	0.027	0.312**	0.424**	0.513**	–		
12. Shame	−0.444**	−0.191	−0.119	−0.103	−0.001	−0.173	−0.099	0.493**	0.394**	0.278**	0.441**	–	
13. Overall positive emotions	0.240*	0.032	0.175	−0.028	0.860**	0.876**	0.855**	−0.055	−0.131	−0.085	−0.007	−0.110	–
14. Overall negative emotions	−0.432**	−0.128	0.009	−0.095	−0.051	−0.172	−0.046	0.694**	0.715**	0.696**	0.750**	0.751**	−0.108

Note ** $p < 0.01$, *** $p < 0.001$

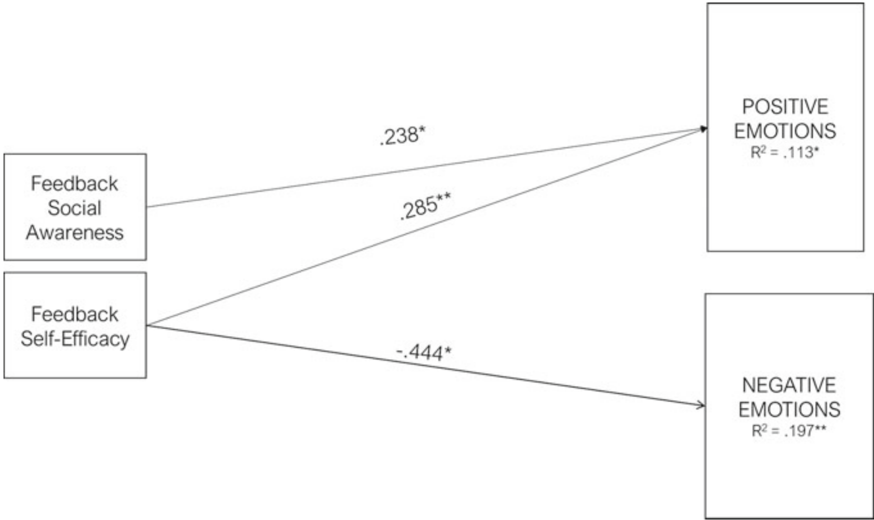

Fig. 4.1 Path analysis of feedback orientations with positive and negative emotions. *Note* All path coefficients are standardized coefficients, only significant paths are included

awareness only significantly predicted pride, but not all other academic emotions, such as enjoyment ($\beta = 0.081, p = 0.505$), hope ($\beta = 0.188, p = 0.109$), hopelessness ($\beta = 0.071$, $p = 0.523$), boredom ($\beta = 0.061$, $p = 0.616$), anger ($\beta = 0.180$, $p = 0.121$), anxiety ($\beta = 0.081$, $p = 0.473$), and shame ($\beta = -0.032$, $p = 0.772$). In addition, feedback accountability was a significant negative predictor of hope but was not significantly associated with all other academic emotions, such as enjoyment ($\beta = -0.031, p = 0.791$), pride ($\beta = -0.094, p = 0.392$), hopelessness ($\beta = 0.119, p = 0.264$), boredom ($\beta = 0.054, p = 0.647$), anger ($\beta = -0.180, p = 0.104$), anxiety ($\beta = -0.041$, p = 0.708) and shame ($\beta = 0.056, p = 0.597$). Results are also presented in Fig. 4.2.

Discussion

Emotions have been widely examined in positive psychology and education (Fredrickson, 2001; Fredrickson & Branigan, 2005). This chapter aimed to examine whether the four dimensions of feedback orientation predict different kinds of academic emotions. The first model tested whether the four dimensions of feedback orientation, feedback utility, feedback self-efficacy, feedback social awareness, and feedback accountability predict positive and negative academic emotions. The second model tested whether these four dimensions are differentially associated with specific academic emotions, such as enjoyment, hope, pride, hopelessness, anxiety, shame, anger, or boredom. The results showed that in Model 1, feedback self-efficacy and

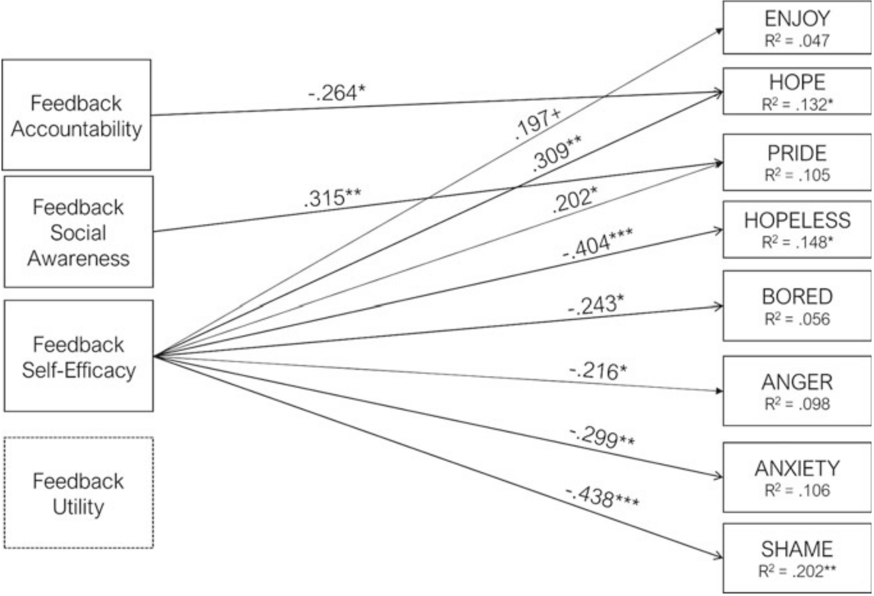

Fig. 4.2 Path analysis of feedback orientations with specific academic emotions. *Note* All path coefficients are standardized coefficients, only significant paths are included

social awareness positively predicted positive emotions. These results suggest that feedback social awareness, and self-efficacy are important dimensions influencing Filipino university students' academic emotions.

The second model tested whether each of the four dimensions of feedback orientation was associated with specific positive and negative emotions. Results showed that only feedback self-efficacy significantly predicted each of the positive and negative academic emotions. Feedback social awareness only significantly predicted pride, while feedback accountability negatively predicted hope. These results provide partial support for Hypotheses 1 and 2.

The results suggest that feedback self-efficacy seems to be an essential predictor of learning-related academic emotions. This finding is consistent with the control-value theory of academic emotions positing that students who believe in their capability to accomplish academic tasks are more likely to have positive academic emotions (Pekrun et al., 2007). In feedback research, researchers also found that when students have high feedback self-efficacy, they are confident in interpreting feedback and taking action to use feedback for performance improvements (e.g., Linderbaum & Levy, 2010; Winstone et al., 2017). Students with high self-efficacy also report higher degrees of enjoyment and relief when studying (Liu et al., 2018) and can effectively manage negative emotions (Pocnet et al., 2017). Motro et al. (2020) also found that when receiving negative feedback, students with high feedback self-efficacy and grit can manage their sadness to perform better in learning tasks. Finally, students who believe they can perform high-quality work are also more likely to seek feedback

to improve (Renn & Fedor, 2001). Finally, students who believe they can perform high-quality work are also more likely to seek feedback to improve (Renn & Fedor, 2001). Hence, enhancing students' feedback self-efficacy may encourage students to become active learners to seek teacher feedback for improving learning.

Surprisingly, feedback accountability is negatively associated with learning-related hope and not associated with all other learning-related academic emotions. Students with more feedback accountability are more likely to uptake feedback to improve academic performance (Nash & Winstone, 2017). This negative association with hope may suggest that students feel a false sense of hopefulness in thinking things will improve, even without trying to respond to teacher feedback. Another alternative explanation would be students' perceptions of responsibility for responding to teacher feedback comments, particularly those negative or complicated comments that might not necessarily lead to hopeful thoughts in learning (Shields, 2015). Hope may be associated with potential moderators, such as the kind of feedback that students expect to receive from their teachers for supporting learning. Students who reported that they expected to receive self-referential feedback (feedback about their progress) reported greater hope than when they expected to receive normative feedback (feedback relative to the performance of others) (Pekrun et al., 2014).

Finally, feedback utility is not associated with learning-related academic emotions. Students may perceive the feedback they receive as only minor comments which do not provide enough information on their performance and next steps. It is also possible that Filipino students receive comments about their work only at the end of the semester (e.g., Griffin et al., 2016); hence the perceived usefulness of feedback and its influence on learning-related emotional outcomes may be minimal. In contrast to feedback utility, feedback social awareness, which also pertains to the value of feedback in a social domain, is related to emotions since it involves a social/relational aspect. This result also suggests that researchers consider the perspective of social values or goals in the feedback context in understanding students' emotions. In a study with two collectivist cultures, namely, Hong Kong and the Philippines, King et al. (2013) found that "social goals were able to predict additional variance in various adaptive educational outcomes even after controlling for the effects of mastery and performance goals" (p. 1505). In another study with a sample of over one thousand Filipino secondary school students, King et al. (2012) also found that "certain kinds of social goals are also important predictors of academic engagement" (p. 749). The stronger effect of feedback social-awareness than feedback utility can be explored further in light of King and his associates' work (e.g., King et al., 2012, 2013).

This study contributes to the growing assessment literature in the Philippines. Teachers rarely provide individualized feedback to students, and students generally learn about their performance at the end of the course (Griffin et al., 2016). This study suggests the need to shift to formative feedback, emphasizing students' ability to respond to feedback. When students feel more capable, they experience more positive emotions while learning. Given the positive correlations among the four dimensions of feedback orientation, how the other three dimensions interact with feedback

self-efficacy and subsequently affect achievement emotions in learning would be a fruitful research agenda to explore. Various research methods (e.g., cross-sectional, longitudinal, and experimental designs supplemented by qualitative inquiries) will contribute to exploring this fruitful research agenda. Based on our review, we found the role of positive emotions in positive education and psychology has been widely tested in the existing literature (e.g., Fredrickson, 2001; Datu & King, 2016; Pekrun et al., 2002; Seligman & Csikszentmihalyi, 2000; Seligman et al., 2009; Villavicencio & Bernardo, 2013b, 2016). However, the relationships between students' perceptions of feedback and emotions in learning remain under-researched (Yang, 2019). Given this, the findings of this study have practical implications for developing intervention studies that may focus on enhancing students' self-efficacy in using teacher feedback to harness the power of feedback (Hattie & Timperley, 2007) in positively affecting students' learning emotions and other learning outcomes.

This study also contributes empirical findings to the control-value theory by applying this theory in the feedback context. One interesting result is that the association between control and value appraisals of feedback is associated with specific positive and negative emotions. Value appraisal of feedback, such as feedback social awareness and utility, had differential emotional outcomes. These results suggest that students may perceive task value (feedback utility) and social value (feedback social awareness) differently in feedback. In addition, the lack of association between feedback utility and emotions seems inconsistent with previous studies conducted in a Chinese sample (e.g., Yang & Yang, 2018), which suggests a possible cultural difference in how students perceive the value of teacher feedback.

We would highlight two apparent limitations for the audience's better interpretations of our results from this descriptive study. First, the study's small sample size limits us from examining more complex relationships and potential outcome variables, such as engagement. Secondly, as a cross-sectional design, we could not make conclusions about the directionality of the effects. Future studies could explore the reciprocal relationship of the variables through a longitudinal design. Despite the limitations of a cross-sectional design with a relatively small sample size, this study contributes to valuable research findings revealing the strongest links between feedback self-efficacy and three positive emotions in learning.

Conclusion

A substantial number of studies have focused on examining the link between external teacher feedback and student achievement (see Hattie, 2009, 2017 for synthesis studies based on big data). However, little is known about the role of students' feedback perceptions in affecting students' uptake of feedback and, consequently, their academic achievement (see Van der Kleij & Lipnevich, 2020 for a critical scoping review). The present study, based on the control-value model (Pekrun, 2006), took the initiative to not only examine students' feedback perceptions through feedback orientation, a construct with multiple feedback perceptions with a sample of Filipino

university students, but also to examine the associations of the four dimensions of feedback orientation with both positive and negative emotions in learning situations. The strongest association between feedback self-efficacy and learning-related emotions supported the control-value theory and informed teachers' improvement of feedback practices to enhance students' feedback self-efficacy.

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Chapter 5
Interacting Dimensions of Locus-Of-Hope and Well-Being of Filipino Students

Allan B. I. Bernardo and Angela Lorraine P. Cunanan

Abstract Different locus-of-hope (or LOH) dimensions predict different indicators of well-being of students in different Asian societies. In most cases, internal and external-family LOH are consistent predictors of students' well-being in different groups of Asian students, while external-peer and external-spiritual LOH predict student well-being in specific cultures. Previous studies investigated the direct effects of the four LOH dimensions on well-being, but recent studies suggest that internal and external-family LOH may be working in a contingent manner. In this study, we explored the possibility that three LOH dimensions (internal, external-family, and external-peer) might be interacting to influence students' well-being. This interaction is proposed to reflect how LOH dimensions are clusters of strengths that work in synergy and in compensatory ways. We surveyed 421 students (ages 12–23) from schools in two urban regions of the Philippines (Metro Manila and Metro Davao). The students completed the LOH and life satisfaction scales, and the results of multiple regression analysis show two significant interaction effects on well-being. Both interactions show how external-family LOH compensates for weak internal and external-peer LOH. The chapter discusses the implications of the synergistic working of LOH dimensions, particularly for hope-building interventions for students.

Practitioner Points

- Students' parents, family members, and friends can be important hope agents.
- Hope-building interventions should encourage students to reflect on how their important life goals relate to their aspirations for and to the expectations of significant others.
- Hope-building interventions should guide students to identify ways by which significant others can provide, assist, or support their strategies for attaining important life goals.

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- Hope-building interventions should help the student to think of how significant others can boost the self-beliefs for attaining important life goals.
- Hope-building intervention should give direction to students to appreciate how strengths in particular hope agents in their lives can compensate for their weaknesses.

Hope is one of the character strengths that has been extensively studied in the educational context. Research across various educational systems have found how hope predicts numerous educational processes and outcomes, and some studies have documented the benefits of hope-building interventions among students. Much of the work on hope in students in schools has drawn from Snyder's (2000) hope theory, which has been extended to include a broader range of locus-of-hope dimensions (Bernardo, 2010), including hope related to how family and friends or peers may help in helping realize one's important hopes in life. As evidence on the benefits of this multidimensional conception of hope in students accumulates, some research suggests how different hope dimensions might be working in a contingent manner, interacting to influence well-being and other positive outcomes. In this chapter, we explore this notion of interacting locus-of-hope dimensions and its relationship with well-being in a sample of Filipino students. We assume that students are mindful of how the internal and external locus-of-hope sources (the self, family, or peers) vary, and as such, their hopeful thoughts reflect an attempt to compensate for weaknesses in one source with the strengths of another source. In exploring these types of compensatory interactions, we hope to provide theoretical insight into how students' hopes relate to their well-being, and guide practices relative to how hope-building interventions might be better able to help students flourish.

Hope and Students: Perspectives of Snyder's Hope Theory

For more than two decades, Snyder's hope theory has served as an influential contributor to the theory and practice of positive education (Rand & Cheavens, 2009). Hope, as defined in hope theory, involves two related ways of thinking about goals: *pathways* and *agency*. Pathways thinking is the perceived ability to create specific paths leading to a desired goal or destination, and agency thinking refers to the perceived confidence or level of intention to achieve such goals (Rand & Cheavens, 2009; Snyder, 2002). Pathways and agency, together, denote a disposition for positive, goal-oriented thinking that is different from similar constructs such as optimism and self-efficacy (Rand, 2018; Snyder, 2000). Hope also functions as a protective factor that helps safeguard individuals from mental and physical problems due to the recurring successful pursuit of goals and the resulting positive affect (Snyder, 2000).

Given its positive nature, the impact of Snyder's hope has been investigated quite extensively in the educational or academic context. Hope helps strengthen the students' goal-directed behaviors, which in turn, allows them to maintain a proactive

orientation towards their goals while also considering strategies that could be counterproductive (Snyder et al., 2003). Students challenge themselves by setting more difficult goals; accordingly, they can better evaluate the attainment of their goals (Feldman et al., 2009). Furthermore, hope among students is positively correlated with their academic achievement (Çelik et al., 2015; Day et al., 2010; Feldman & Kubota, 2015; Marques et al., 2011), their use of adaptive learning goal orientations (Feldman & Dreher, 2012; Peterson et al., 2006), and their psychological well-being (Gilman et al., 2006).

Moreover, as there are numerous benefits associated with higher levels of hope, the construct is harnessed and operationalized through targeted interventions for students (Feldman & Dreher, 2012; Lopez et al., 2000). Positive education researchers have developed propitious hope-based interventions to enhance students' goal-oriented thinking and the successful pursuits of these goals (e.g., Davidson et al., 2012; Feldman & Dreher, 2012; Marques et al., 2011). For instance, findings from a single-session hope intervention among college students showed that higher levels of hope were connected to increased levels of one's purpose in life and vocational calling—that is, the degree of perceived personal meaning in one's work (Feldman & Dreher, 2012). Another hope-based workshop that aims to foster hope also reported that more hopeful first-year college students had improved academic performance and increased sense of coherence and self-efficacy (Davidson et al., 2012). Furthermore, in a study involving middle schoolers, hope can also bring about other psychological benefits: an increased sense of life satisfaction and self-worth (Marques et al., 2011). Such positive outcomes of hope-building interventions among students point to important viable features of positive education programs.

Locus-of-Hope Perspective: Broadening Resources of Hope

Hope theory assumes that hopeful cognitions are relative to the individual's personal abilities and capacities in reaching their goals. This assumption reflects a more *disjoint* model of agency (Markus & Kitayama, 2003), which highlights the individual's personal intentions and interests when doing positive actions. Concurrently, this also ignores the role of external factors or agents contributing to the person's goal-attainment. To address this gap, Bernardo (2010, 2015) proposed a more *conjoint* model of hope theory that expands the individualistic orientation into one that is more collectivistic by adding *external* locus-of-hope dimensions that refer to the external agents involved in the person's goal-attainment processes. These external locus-of-hope dimensions reflect the more collectivistic orientation as it highlights the role of the individual's social groups (i.e., family, peers) and spiritual/supernatural forces relative to the individual's thoughts about agency and pathways for attaining their goals. The locus-of-hope model (Bernardo, 2010) maintained the concepts and assumptions from Snyder's hope theory (2002) in the *internal* dimension but extended the theory by adding the external dimension with three subdimensions (i.e., external-*family*, external-*peer*, external-*spiritual*).

The empirical evidence on how external locus-of-hope dimensions are linked to various positive outcomes has been slowly growing. There are studies with East Asian and Southeast Asian samples that show associations of locus-of-hope and indicators of student well-being and learning experiences (e.g., Bernardo, 2015; Bernardo et al., 2016, 2018a, 2018b, 2022a; Datu & Mateo, 2017; Du & King, 2013). External locus-of-hope dimensions were found to be associated with satisfaction with life among high school students (Bernardo, 2015) and university students (Bernardo et al., 2018b), with self-esteem (Bernardo et al., 2018a; Du et al., 2015), and with the use of some adaptive collectivist coping strategies (Bernardo et al., 2022b) in various Asian educational systems. Other studies have also shown how the external-peer dimension is connected to the use of collaborative learning strategies (Bernardo et al., 2016), and is a buffer against the effects of discrimination (Datu & Mateo, 2017) and financial stress (Bernardo & Resurreccion, 2018) among college students. One study also shows a positive relationship between the external locus-of-hope dimensions and the achievement of college students (Lucas & Ouano, 2018).

Recently, research using the locus-of-hope model has been conducted with non-Asian samples, thus extending the validity of the model beyond Asian cultures. For example, the locus-of-hope scales have been validated with samples from the USA (Muñoz et al., 2019; Wagshul, 2018); and Canada (MacDonald et al., 2022). One study found that external locus-of-home predicted positive outcomes, particularly lower acquired capability for suicide (Wagshul, 2018). Although this study did not involve students, it is noteworthy for showing how the model that includes the external locus-of-hope dimensions is useful in individuals from non-Asian or non-collectivist societies also.

In a culturally diverse sample of Canadian students, external locus-of-hope dimensions were associated with personal and relational self-esteem (Dargan et al., 2021). Another study in the USA involving an adolescent female student sample (wherein majority identified as Caucasian or White) showed that external-family locus-of-hope's relationship with the students' life satisfaction was mediated by internal locus-of-hope (Muñoz et al., 2019). This finding was explained as being related to how one's parents and guardians are important sources of personal agency and pathways for goal attainment. This theoretical insight prompted us to consider the possibility that the different locus-of-hope dimensions are actually working together, possibly in interacting ways. The study we report in this chapter begins exploring this theoretical notion, as we explain in the next section.

Current Study

Previous research on the locus-of-hope (LOH) model assume that the four LOH dimensions are related to each other, but their relationships with positive outcomes have always been examined as direct effects. In this study, we explore some theoretical proposals that assume that the different LOH dimensions are clusters of strengths—similar to the conceptualization of psychological capital (Luthans et al.,

2015) or of resource caravans (Hobfoll, 2002) as clusters of resources—that go together and interact in synergy. However, the synergistic interaction we propose is different from these other two models mainly because hope is not conceptualized as a resource or capital that needs to be conserved and deployed appropriately at different points in one's life. Instead, hope theory assumes that hope is a cognitive disposition (Snyder, 2002) that drives goal-related thoughts. In this regard, we propose that the dimensions of LOH dispositions interact in a manner that reflects a compensatory approach.

Our compensatory model assumes that the different LOH dimensions interact so that a strong LOH dimension may compensate for another weak dimension. Thus, a student with low internal LOH might still have high well-being if she has strong external-family LOH, or one with low external-family LOH but high external-peer LOH, or vice versa. Thus, it is not necessary for students to possess high levels across all LOH dimensions to experience well-being. Indeed, one dimension might suffice, because one LOH dimension can compensate for weaknesses in other dimensions. Low well-being arises in cases when the student is low in all LOH dimensions.

We test these basic assumptions in a sample of Filipino high school and college students who answered the LOH scales and the Satisfaction with Life Scale (Diener et al., 1985). In addition to testing the direct relationship between each LOH dimension and the students' life satisfaction, we also tested the different interaction effects among the different dimensions. Previous studies among different Asian students showed that internal LOH and external-family LOH were consistently positively related to students' life satisfaction (Bernardo, 2015; Bernardo et al., 2018b) and other measures of positive well-being (Bernardo et al., 2018a; Du et al., 2015). The data are inconsistent regarding the role of the other two external LOH dimensions. However, there is emerging evidence that external-peer LOH buffers the effects of stressors among Filipino students (Bernardo & Resurreccion, 2018; Datu & Mateo, 2017) and relates to positive collaborative learning strategies in schools (Bernardo et al., 2016). On the other hand, there is evidence on how external-spiritual LOH relates to maladaptive coping among students (Bernardo et al., 2018b) and other Filipino samples (Bernardo & Estrellado, 2017). In this regard, we excluded external-spiritual LOH in the test of the hypotheses, and only examined the direct relationships and the interactions among internal, external-family, and external-peer LOH.

Method

Participants and Procedures

Participants were 424 high school and university students in two large metropolitan areas in the two largest islands in the Philippines (Luzon and Mindanao). Some students had missing data for the main variables and were excluded in the final analysis, so the final sample was 414 students. The students' ages ranged from 12 to

23 years and the mean age was 16.99 years (*SD* 3.54); 50.24% were female. For the high school students, the school heads (principal or director) sought permission of the parents to have their children participate in the survey, and the survey questionnaires were answered in their classrooms. For university students, the students' informed consent was sought for those who answered the survey, and the questionnaires were answered within the university premises.

Measures

Locus-of-hope Scale. The scale (Bernardo, 2010) had four subscales measuring the four LOH dimensions: internal, external-family, external-peer, and external-spiritual; but the answers in the external-spiritual subscale were not included in the analysis. Each subscale had eight items that expressed a thought about goal attainment. Samples of items for each subscale are "I meet the goals I set for myself" (internal), "My parents have lots of ways of helping me attain my goals" (external-family), and "I have been able to meet my goals because of my friends' help" (external-peer). The students were asked to indicate their agreement with each item using a scale from 1 (*definitely false*) to 4 (*definitely true*).

Satisfaction with life scale. The five-item scale (Diener et al., 1985) measured the students' general subjective well-being (sample item: "In most ways my life is close to my ideal"). The students' responded using a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Results

The descriptive statistics for the main variables (including the internal consistency coefficient for the scales) are presented in Table 5.1. Consistent with previous studies, life satisfaction was positively associated with both internal and external-family LOH, but a better test of these relationships will be in the multiple regression analysis.

To test the proposed interacting effects among the LOH dimensions, we had to create the interaction terms. First, the scores of the three LOH scales were centered by subtracting each score from the scale mean to reduce multicollinearity between the main effect and the interaction terms. Centering the values also ensures that the interpretation of the interaction effects will occur at a meaningful value (Cohen et al., 2003). The centered scores were then used to compute the cross-product values used as the interaction term. Three two-way interaction terms were created: internal LOH × external-family LOH, internal LOH × external-peer LOH, and external-family LOH × external-peer LOH. One three-way interaction term was computed: internal LOH × external-family LOH × external-peer LOH.

Table 5.1 Descriptive statistics for key variables

				Correlations (r)				
	α	*M*	*SD*	1	2	3	Age	Sex
1. Life satisfaction	.76	4.69	1.10	—			-.05	.08
2. Internal LOH	.62	3.03	0.41	.17***	—		-29***	-.04
3. External-family LOH	.75	2.90	0.62	.13**	.49***	—	-.60***	-.07
4. External-peer LOH	.89	2.73	0.47	.03	.45***	.52***	. 34***	-.00

***p* < .01, ***p* < .001. Note: LOH = locus-of-hope, Sex: 1 = Male, 2 = Female

For the hierarchical regression analysis, life satisfaction was regressed to age and sex in the first model, then the three LOH scores were added in model 2. The three two-way interaction terms were added in model 3, and the three-way interaction term was added in model 4. The results of the regression analysis are summarized in Table 5.2.

The three-way-interaction term did not explain any additional variation in the students' life satisfaction, so we can focus our attention on the main effects and the two-way interaction effects. Consistent with much of the hope literature, internal LOH (or dispositional hope) was consistently related to the students' life satisfaction. External-family LOH was not associated with the students' life satisfaction, which is a departure from previous findings with other studies that involved Filipino students. But the two-way interactions may provide some insights regarding this result. Two interaction effects were statistically significant, and both involved external-family LOH.

The interaction between internal LOH and external-family LOH was a significant predictor of well-being. We can refer to Fig. 5.1 to better understand this interaction effect, and the figure shows that among students with high internal LOH, there is no relationship between external-family LOH and life satisfaction. Although the line seems to have a negative slope, the gradient of simple slope $= -0.47$ was not statistically significant, $t(413) = -1.76, p = 0.079$. This simple effect shows that for students with high internal LOH, it did not really make a difference whether they had low or high external-family LOH. In a sense, high internal LOH compensates even for low external-family LOH. But among students with low internal LOH, external-family LOH was positively associated with life satisfaction; gradient of simple slope $= -0.80$, $t(413) = 3.15$, $p = 0.002$. For those who have weak internal LOH, their high external-family LOH can compensate and they still report relatively high life satisfaction (comparable to those with high internal LOH).

The interaction between external-peer and external-family LOH was also a significant predictor of well-being, and this interaction effect is depicted in Fig. 5.2. In interpreting this interaction, we should recall that the two external LOH dimensions do not have significant direct relationships with life satisfaction. But Fig. 5.2 shows

Table 5.2 Summary of hierarchical multiple regression analysis

	Model 1		Model 2		Model 3		Model 4	
	β	95% CI	β	95% CI	β	95% CI	β	95% CI
Age	– .06	[–0.05, 0.01]	.02	[–0.03, 0.04]	.02	[–0.03, 0.04]	.02	[–0.03, 0.04]
Gender	.09	[–0.02, 0.40]	.10*	[0.01, 0.42]	.09	[–0.01, 0.41]	.10**	[0.01, 0.42]
Internal LOH			.16**	[0.12, 0.74]	.18**	[0.19, 0.80]	.17**	[0.14, 0.77]
External-family LOH			.12	[–0.03, 0.46]	.10	[–0.06, 0.43]	.09	[–0.08, 0.41]
External-peer LOH			–.11	[–0.54, 0.00]	–.07	[–0.44, 0.13]	–.11	[-0.56, 0.05]
Internal x External-family LOH					–.15**	[–1.07, –1.17]	–.15**	[–1.08, –0.19]
Internal x External-peer LOH					.10	[–0.14, 1.15]	.08	[–0.25, 1.06]
External-family x External-peer LOH					–.16*	[–1.03, –0.12]	–.16*	[–1.03, -0.12]
Internal x External-family x External-peer LOH							.11	[–0.13, 1.33]
R^2	.01		.05		.09		.10	
F	2.17		3.95**		4.97***		4.73**	
df	2, 411		5, 408		8, 405		9,404	
ΔR^2			.04		.04		.01	
ΔF			5.09**		6.41***		2.64	
Df			3, 408		3, 405		1, 404	

*p < .05, **p < 0.01, ***p < 0.001; LOH = locus-of-hope

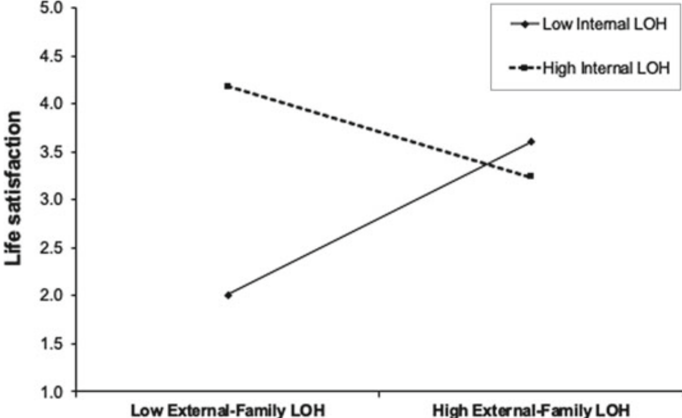

Fig. 5.1 Graphic presentation of moderating effect of internal locus-of-hope on the relationship between external-familiy locus-of-hope and life satisfaction

that among students with low external-peer LOH, there is a strong positive relationship between external-family LOH and life satisfaction; gradient of simple slope = 0.74, $t(413) = 2.88$, $p = 0.004$. Again, it seems that external-family LOH is compensating for the students' low external-peer LOH, so much so that the students report high life satisfaction. On the other hand, among students with high external-peer LOH, external-family LOH was unrelated to life satisfaction; gradient of simple slope = −0.41, $t(413) = -1.52$, $p = 0.129$. In this case, it does not seem that high external-peer LOH can compensate for low external-family LOH nor vice versa.

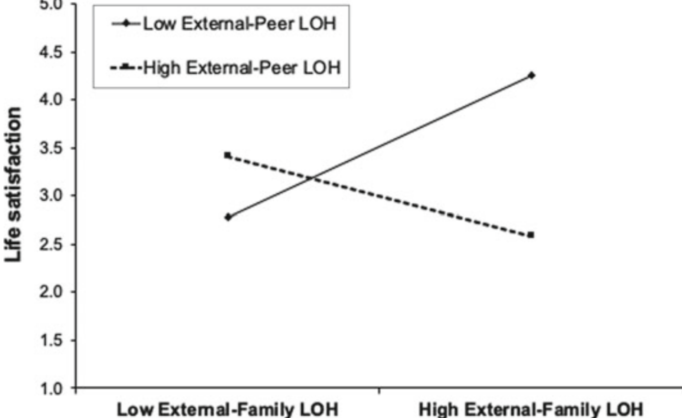

Fig. 5.2 Graphic presentation of moderating effect of external-peer locus-of-hope on the relationship between external-familiy locus-of-hope and life satisfaction

Discussion

The study was undertaken to explore the possible interactions among the different LOH dimensions based on the assumption that these LOH dimensions may be working synergistically. In particular, we proposed that the LOH dimensions might compensate for weaknesses in the other dimensions. Our results provide some evidence for this assumption. The significant interaction effect between internal and external-family LOH on life satisfaction (see Fig. 5.1) could be interpreted as supporting the view that high internal LOH can compensate for low external-family LOH, and that high external-family LOH can partly compensate for low internal LOH. The significant interaction effect between external-peer and external-family LOH on life satisfaction (see Fig. 5.2) seems to partly support the same point. High external-family LOH appears to compensate for low external-peer LOH, but not the other way around.

Limitations of the Study

Before discussing the implications of these findings, we need to acknowledge some important limitations in our study. First, the sample was recruited from a small number of schools. Although there is no definite research suggesting that school environment and other ecological factors moderate the correlates of LOH, there is a possibility that the limited sample of schools might not capture variations in how LOH dimensions interact in relation to students' well-being. Indeed, this is an interesting factor to pursue in future research with student samples from a larger number and more diverse schools that consider school and other ecological variables as distal factors that may relate to LOH and its correlates. Extending this thought further, it would be interesting to test the same theoretical proposals using a wider variety of cultures and educational systems. Such studies are likely to provide more nuance to understanding the synergistic workings of LOH in educational contexts.

The choice of life satisfaction as the measure of student well-being also its limitations. We used a measure of global measure of satisfaction with life (Diener et al., 1985) as our indicator of students' well-being but such global measures have been criticized as being insufficient the multidimensional aspects of well-being (Dolan & White, 2007; Huppert & So, 2013). Indeed, more multidimensional measures of well-being have been proposed to have a more holistic appreciation of students' well-being (Kern et al., 2015; Wang et al., 2022). It would be important to try to replicate the current study's findings with other measures of student well-being in future research.

Another limitation is the use of a cross-sectional research survey that relies on self-reports. Although this approach was sufficient to point to interesting interaction effects consistent with the proposed theoretical arguments, more confidence can be drawn from studies that do not rely solely on self-reports gathered at one point in

time. Future research can employ longitudinal approaches that also have more varied measures of well-being, including those that do not depend on self-report.

Theoretical Insights

The main insight that we propose to derive from the findings is that LOH dimensions are like clusters of strengths that work in synergy, with LOH dimensions compensating for possible weaknesses in other dimensions. This insight is very consistent with basic assumptions of positive psychology and positive education that emphasize the role of specific strengths (not weaknesses) in shaping students' well-being. We see some evidence for how strong external-family LOH in Filipino students can lead to life satisfaction, even as internal LOH or external-peer LOH are weak.

We did notice that among the three LOH dimensions we studied, it was only two—internal and external-family LOH—that seemed to be doing the compensating, so to speak. We did not find any evidence that external-peer LOH compensated for weak internal or external-family LOH among the students. We earlier noted that internal and external-family LOH tend to be more consistently associated with well-being among different samples of Asian students (Bernardo et al., 2018a, 2018b). We also noted that the external-peer LOH tended to be less consistent even if it has been shown to buffer the effects of stress among samples of Filipino university students (Bernardo & Resurreccion, 2018; Datu & Mateo, 2017). We could theoretically assume that stronger LOH dimensions are more likely to function in a synergistic compensatory way, and we can even speculate a hierarchy of sorts among the LOH dimensions. Indeed, the empirical evidence, at least among Asian student samples, seems to be more consistently stacked for the positive predictive value of internal and external-family LOH. To this stack, we can add initial evidence on the synergistic functioning of these two LOH dimensions among students, but we want to underscore that this particular synergistic functioning might be specific to the Filipino culture, where the two types of LOH dimensions are likely to be strong resources of well-being. We cannot make claims about whether the synergistic relationship between internal and external-family LOH will be found in other cultures; but what we propose is that the compensatory functioning of different LOH dimensions might take different forms in other cultures. For example, in hypothetical cultures where external-family and external-spiritual LOH are potent predictors of well-being, it is possible that those two have the synergistic functioning, and so on, with different combinations of LOH dimensions that are predictors of well-being in other cultures. The cross-cultural predictions related to the compensatory functioning of LOH will need to be investigated in future research designed to test the appropriate hypotheses. And these theoretical insights and speculations have some important implications for psychologists and positive educators working on strengthening student well-being in schools in different cultures.

Practical Propositions

The convergence of empirical evidence on how hope relates to student well-being and others underscores the importance of paying attention to hopeful thoughts among students. The research related to the different LOH dimensions points to the importance of attending to how hope may come in different forms of strength among diverse types of students. This viewpoint is most important to consider as schools develop hope-building interventions for students.

As previously noted by Bernardo and Sit (2020), hope interventions in schools have focused on dispositional hope, that is, on strengthening students' positive goal-related thoughts based on their personal agency (or will) and pathways (or strategies). The research on LOH suggests that hope interventions for students should consider that students' agency and pathways could also draw from external sources, mainly their family (and in some other ways their peers and spiritual beliefs). Bernardo and Sit (2020) sketch what hope interventions that consider external LOH dimensions might look like, and we reiterate some of their suggestions here.

First, hope interventions typically involve asking students to identify and visualize important life goals. A LOH-based intervention would also ask the students to consider how their goals are also important to other people in their lives and their communities. In many Asian societies, students tend to define their educational or learning goals with reference to their aspirations for and/or to their expectations from parents and family, friends, and society at large (Bernardo et al., 2008; Liem et al., 2008); nevertheless, pivoting goal-mapping in hope interventions towards a more relational focus allows students to appreciate how their goals have broader value.

Second, hope interventions also involve asking students to think of strategies they will employ to meet their goals and make these strategies as concrete and detailed as possible. A LOH-based intervention for students would also invite individual students to think of how their parents, other family members, friends, teachers, among other significant others, can support or help in the strategies they think of. Students could also be invited to think of strategies that these other persons can do for and with them to meet their goals, and how these other persons might be creating some obstacles in their pathways. This broader consideration of pathway-related thinking might provide a more extensive and more realistic space where students build their hope-related pathway thoughts.

Third, hope interventions typically encourage students to strengthen their sense of agency and self-belief in their capacity to implement their strategies to meet their important goals. A LOH-based intervention could also encourage thoughts about how they are supported by parents, family members, friends, teachers, and other significant others in affirming their own agency. Of course, there might be significant others in the student's life who may not be affirming their agency, and it is important that the student also acknowledges those cases. Nevertheless, it is valuable for the student to know that there are other people who can help them monitor their progress towards their goals, provide them with positive hope-talk, and give them stronger motivation to persist towards their goals.

To the broad suggestions of Bernardo and Sit (2020), we add a suggestion to engage students in explicit compensatory thinking about how different hope agents in their life can help in their goal pursuit. As we mentioned in the preceding paragraphs, there might be significant others who will be obstacles in the student's pathways or who will not be supportive of the student's agency. The students can be helped to see how such "weaknesses" need not debilitate their goal pursuit, as they can draw from the shared agency and pathways of other significant people in their lives. We can infer some exemplars of how this might be happening from the results of our study. Some of the students who may think that their peers and classmates are not reliable sources of hope may be drawing instead from thoughts about how their parents are strong sources of agency and pathways for their goals. Similarly, students who may doubt their own personal agency and pathways may be bolstered by their parents' support and shared agency. On the other hand, when one's parents are not providing such support in meeting one's goals, some students may be bolstered by their self-beliefs about their capability and strategies to meet these goals in life. It is important that hope interventions not only appreciate the range of hopeful sources that students may have, but also that the students can let the strengths of these sources compensate for the weaknesses.

Conclusion

The locus-of-hope model conveys an important message to students and the positive educators working together to foster well-being in schools. This message is that hope does not only come in the form of thoughts about personal capacities and strategies for goal attainment, but also that hope comes in more varied forms that are shared by significant people in the student's life. Our study's findings build on this message by pointing to how these varied forms of hope may be working in synergy so that the hope-strengths can compensate for possible weaknesses. There is still more work that can be done to fully realize how hopeful thoughts can bolster student well-being, and we hope to have contributed to broadening the scope of this work in meaningful and concrete ways.

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Chapter 6
Protective Role of Character Strengths in School Adjustment Among Low-Track Students

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Abstract Studies have focused on protective factors for high-track students but not low-track students (where risk factors are the focus instead). Thus, the present study investigated the character strengths (i.e., caring, self-control, and inquisitiveness) that serve as protective factors of school adjustment for low-track students under the ability grouping framework. Seventh grade students ($n = 211$ at Time 1) completed an online survey regarding their personal and family demographic information and character strengths. The students were assigned to a low-ability group (LAG) and high-ability group (HAG) according to their mathematics examination scores at the start of the first semester in 2017. At the end of the same semester, the students completed another questionnaire ($n = 202$ at Time 2) about their academic self-efficacy, positive emotions, sense of belonging to the class, and examination scores. The HAG scored significantly higher on the three strengths, and their parents generally had higher educational levels. In the LAG, self-control was the strongest predictor of academic self-efficacy and sense of belonging to the class, and inquisitiveness was the strongest predictor of positive emotions. In the HAG, none of the three strengths were significantly related to academic self-efficacy and positive emotions; inquisitiveness only significantly predicted the sense of belonging to the class. Character strengths compensated for socioeconomic disadvantage by

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enhancing school adjustment in the LAG. Future psychoeducational interventions should adopt ability grouping to promote school adjustment and mitigate the effects of socioeconomic disparity in schools.

Keywords Ability grouping · Character strengths · School adjustment · Adolescents

Practitioner Points

- Character strengths can act as a buffer for low-track students by enhancing school adjustment.
- Self-control is crucial for school adjustment in low-track students.
- Strength-based interventions combined with ability grouping can achieve positive educational outcomes.

For almost a century, ability grouping has been a prevalent educational policy worldwide because it meets the diverse educational needs of students, regardless of their academic ability. To reduce the heterogeneity of instructional groups, schools or teachers adopt this practice in their organizational plans. Between-class ability grouping reduces the heterogeneity of each class for a subject, and within-class ability grouping reduces the heterogeneity of groups within the same class (Slavin, 1990). Despite its wide application, the influence of ability grouping on school adjustment is a controversial topic in educational practice. The concern among advocates is teaching effectiveness, whereas that among opponents is equity, including the negative effects of ability grouping on low achievers (low self-esteem, lower aspirations, and negative attitudes toward school) (Nicholson, 1998). To achieve a balanced understanding of ability grouping, school adjustment, a comprehensive concept incorporating both concerns, should be introduced. School adjustment is appropriate for promoting students' success and well-being as positive education (Seligman et al., 2009), as it partly overlaps the PERMA model (Seligman, 2011) in terms of parameters such as positive emotions, positive relationships, and achievement.

School adjustment is a dynamic process related to how well a person fits in or integrates with the school environment (Ramsay et al., 2007). This concept comprises three core aspects: (a) subjective aspects, which comprise the ability to maintain positive attitudes about the self and feel happy and content rather than depressed and hopeless (e.g., self-efficacy and self-concept); (b) interpersonal aspects, which comprise the ability to develop and sustain warm and loving relationships where both parties give and receive social support (e.g., rapport with teachers and peers); and (c) achievement-related aspects, which comprise the ability to be productive and creative (Kwan et al., 2004) (e.g., exam scores and handwork).

Academic effectiveness is the most frequently discussed aspect of ability grouping. Between-class ability grouping has been argued to have little or no effect on overall achievement among elementary and secondary school students

(Betts & Shkolnik, 2000; Kulik & Kulik, 1982; Slavin, 1987; Steenbergen-Hu et al., 2016). Moreover, some researchers have noted that high-track assignments accelerate achievement, whereas low-track assignments significantly reduce it (Dar & Resh, 1986; Gamoran, 1987; Oakes, 1982). Goldberg and Passow (1966) demonstrated that grouping did not positively affect students' academic achievement. Teachers and group differences within individual classrooms more strongly influence the variations in achievement than the student's range of abilities or intellectual abilities. Furthermore, family background (Hallam & Parsons, 2012), curricular polarization (Schofield, 2010; Wiliam & Bartholomew, 2004), and inequity in educational resources (Braddock & Dawkins, 1993; Oakes, 2008) all contribute to variations in academic achievement between low-track and high-track students. Regarding the subjective and interpersonal aspects, Belfi et al. (2012) conducted a literature review and concluded that ability grouping is beneficial for the school well-being of high-track students but detrimental for that of low-track students. The converse holds true for students' academic self-concept. Concerning self-efficacy, Usher and Pajares (2006) reported that within the subject of reading, a variety of factors (i.e., mastery experiences, vicarious experiences, social persuasions, and physiological state) predicted academic and self-regulatory efficacy for all students but that mastery experience did not predict students' self-efficacy in below-level courses. However, Hall (2014) noted that mastery experience, social persuasion, and a negative physiological state predicted mathematics self-efficacy for above-average-level and average-level students. Only mastery and vicarious experiences predicted mathematics self-efficacy for below-average-level students. These studies have revealed that ability grouping has complex relationships with students' subjective and interpersonal aspects of school adjustment. Moreover, the influence of ability grouping hurts low-track students more than high-track students.

From the perspective of the risk factor and protective factor paradigm (Coie et al., 1993), studies have concluded that high-track students have more protective factors working in their favor, including high family socioeconomic status (SES), high-quality instruction, and positive peer modeling, whereas low-track students have more risk factors working against them, including low family SES, poor-quality instruction, negative peer pressure, low prior knowledge, and behavioral problems (Smith et al., 2016). To prevent the negative outcomes of grouping and promote positive school adjustment outcomes, protective factors should be investigated further, especially among low-track students. Only a few studies have examined protective factors for low-track students, who are unlikely to receive protection from their neighborhoods, families, schools, and peers (Durlak, 1998). Accordingly, using the ability grouping framework, the present study examined the protective roles of character strengths as compensation for limited external protective factors.

Character strengths are morally valued positive qualities manifested through cognition, emotion, motivation, and action beneficial to oneself and others (Peterson & Seligman, 2004). Using a systematic framework for studying character strengths, namely VIA Classification (Peterson & Seligman, 2004), researchers in the United States (Mcgrath, 2015; Shryack et al., 2010), Hong Kong SAR (Ho et al., 2016), and Mainland China (Duan et al., 2013) have independently developed a

potentially universal structure of character strengths by using large samples and advanced statistical methods (Ho et al., 2014a, b). A replicable three-factor structure of good character strengths across all measures was developed. Thus, among five-factor models (Azanedo et al., 2014; Peterson & Park, 2012; Ruch et al., 2010; Singh & Choubisa, 2010), four-factor models (Brdar & Kashdan, 2010; Macdonald et al., 2008), three-factor models (Khumalo et al., 2008; Shryack et al., 2010), and two-factor models (Park & Peterson, 2010), the three-factor solution offered by VIA could be a universal structure of character strengths across cultures. The three general character strengths comprise interpersonal strength (defined as the love, concern, and ability to express gratitude of a person toward others), intellectual strength (defined as the impulse to create and curiosity in an individual), and self-regulation (defined as the individual's persistence toward achieving their goals and ability for self-control). The three strengths were later renamed as caring, inquisitiveness, and self-control, respectively, by Duan and Bu (2017a, 2017b). These strengths are critical for school adjustment (Shoshani & Slone, 2012) or adaptation (Duan & Bu, 2017a, 2017b). The subjective aspects of character strengths are associated with positive emotions (Gruber & Johnson, 2009; Shiota et al., 2006), subjective well-being and life satisfaction (Blanca et al., 2017), self-efficacy (Weber et al., 2013), and fewer depressive symptoms and suicidal ideation (Park & Nansook, 2004) in adolescents. The interpersonal aspects are significantly related to social functioning at school, that is, higher peer acceptance and higher friendship quality (Wagner, 2018). Regarding academic achievement, Park and Peterson (2008) reported that middle school students with strengths such as perseverance, fairness, gratitude, honesty, hope for the future, and a positive perspective at the beginning of the school year had higher grades at the end of the year. Self-control-related strengths, such as perseverance; caring-related strengths, such as social intelligence; and inquisitiveness-related strengths, such as hope, were most strongly correlated with positive classroom behavior, thereby enhancing school achievement (Wagner & Ruch, 2015). However, only a few studies have regarded strengths as protective factors for students and have explored their role in decreasing the academic achievement gap between low-SES and high-SES students (Morales, 2010). Because lower SES and minority students are disproportionally represented in low-track classrooms (Rosenbaum, 1980), they have few external protective factors working in their favor, such as active and effective parental input. Consequently, they must depend extensively on internal protective factors, such as interpersonal strengths, to achieve positive educational outcomes.

Using the ability grouping framework, the present study investigated the longitudinal relationship between character strengths and school adjustment variables (positive emotions, academic self-efficacy, sense of belonging to the class, and mathematics examination scores) in school students. Students' subjective aspects were reflected by academic self-efficacy and positive emotions. Academic self-efficacy is an individual's belief that they can perform well at a given level on an academic task or attain a specific academic goal (Bandura, 1997; Chemers et al., 2001). Positive emotions include joy, interest, contentment, pride, and love. According to Broaden-and-Build Theory, these emotions broaden people's momentary thought–action repertoires, which then serves to build their long-term stock of personal resources

(Fredrickson, 1998, 2001). Additionally, interpersonal aspects were reflected by the sense of belonging to the class, which indicates that students consider the class to be a community where they are valued and cared for (Cheng, 2004; McMillan & Chavis, 1986). Achievement aspects were reflected by scores on mathematics examination scores.

Methods

Participants and Procedure

In the present study, students from a middle school in Wuhan, China, were recruited as participants. Following the school policy of providing proper instruction to students with different levels of prior mathematics knowledge, 249 seventh graders (mean age = 13.01 years; female students = 122, male students = 127) from six heterogeneous classes were assigned to a high-ability (top 50%) and low-ability (bottom 50%) groups (HAG and LAG, respectively) according to their mean scores of four successive unit quizzes in September 2017 (on a scale of 100, with 60% as the passing mark). The principal invited the researchers to evaluate the effects of ability grouping on students. All students and parents provided their written informed consent per the protocol of an institutional review board.

After the students were assigned to the HAG and LAG, personal and family demographic information and character strengths were measured in March 2017 (Time 1) through an online survey. The sample size was 211 (mean age = 13.02 years; female students = 103, male students = 108). At the end of that term (Time 2), we measured the students' level of school adjustment, which was reflected in the variables of self-efficacy, positive emotions, and sense of belonging to the class. Because a few students were absent at Time 2, the total number of participants was 202 (mean age = 13.01 years; female students = 103, male students = 99).

Measurements

Character Strengths. Strengths were measured using TICS, a 15-item scale for measuring caring, inquisitiveness, and self-control (five items per subscale) (Duan & Bu, 2017a, 2017b). Questionnaire items were rated on a five-point Likert scale, ranging from 1 (*very much unlike me*) to 5 (*very much like me*); for example, "I can find something of interest in any situation" (inquisitiveness), "I enjoy being kind to others" (caring), and "I do not give up" (self-control). In the present study, TICS had satisfactory Cronbach's alpha values (0.84–0.86).

Academic Self-efficacy. Academic self-efficacy was measured using the five-item self-efficacy subscale of the Self-Regulated Learning Scale (Hood et al., 2015). This

subscale contains statements concerning how much an individual feels confident in their ability to engage with and complete learning activities, such as "I feel that I can learn whatever I am instructed to." Questionnaire items were rated on a five-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Cronbach's alpha for the scale was 0.89.

Positive Emotions. Students' positive emotions were assessed using the Positive Experience Scale (PES) (Wang & Lv, 2011). This one-factor scale was developed in Chinese to measure college students' positive emotions, including happiness, optimism, hope, satisfaction, and gratitude. The scale comprises 15 items (e.g., "I feel very satisfied with my life and study") and employed a 6-point Likert scale (1 = *not at all*; 6 = *extremely*). The PES has high reliability and convergent validity. The Cronbach's alpha for the PES was 0.90.

Sense of Belonging to the Class. Students' sense of belonging to the class was measured using the Classroom Sense of Community Scale (SoC-S) (Petrillo et al., 2016). This is a 25-item self-report scale comprising five subscales: (a) sense of belonging to the class and emotional connection with peers; (b) satisfaction of needs and opportunities for involvement; (c) support from and emotional connection with peers and teachers; (d) support from peers; and (e) opportunities for influence. Questionnaire items were rated on a five-point Likert scale (1 = *not at all true*; 5 = *completely true*). Higher scores reflect a stronger sense of classroom community. The homogenous class was used as a reference community. The Cronbach's alpha of SoC-S and its subscales ranged from 0.94 to 0.98.

Academic Achievement was measured using the mean of Grade 7 and Grade 8 final examination scores.

Data Analysis

Before statistical analysis, common method bias was assessed both by Harman's single-factor test using SPSS 20.0 and by controlling for the effects of the unmeasured latent methods factor (ULMC) using MPLUS 7.0 software. Subsequently, data analysis was performed in three steps. First, to verify whether character strengths differed between ability groups, descriptive statistics of these strengths in LAG and HAG were calculated and a *t* test was conducted using SPSS 20.0 to determine mean differentiations. Second, partial correlations were conducted to ascertain the associations between character strengths and school adjustment variables in LAG and HAG. Third, to examine the prediction power of these strengths on these variables in the two groups, eight hierarchical regression analyses were performed with gender, age, and parental education levels used as control variables at the first step and the three strengths used as predictors at the second step.

Results

Common Method Bias

Two analyses were conducted to assess the influence of common method bias. First, this study performed Harman's single-factor test (Podsakoff et al., 2003), covering all variables (inquisitiveness, caring, self-control, self-efficacy, positive emotions, sense of belonging to the class) measured using a self-report questionnaire. Eight factors were extracted to account for 80.22% of the variance, and the first factor explained 45.1% of the variance, which did not account for the majority of the covariance in all variables. Second, ULMC was used to ascertain common method deviation (Richardson et al., 2009). The fit of the model with a latent common methods variance factor (CFI = 0.356; TLI = 0.333; RMSEA = 0.191; SRMR = 0.173) did not outperform the six-factor model (CFI = 0.709; TLI = 0.696; RMSEA = 0.129; SRMR = 0.073) without a latent common methods variance factor (ΔCFI = 0.353; ΔTLI = 0.363; ΔRMSEA = 0.062; ΔSRMR = 0.1). The six-factor model had good fit. The results suggested that common method bias is not a major concern here.

Character Strengths in Heterogeneous Ability Classes Before Grouping

Table 6.1 presents the descriptive statistics for each character strength in six heterogeneous ability classes. The results of one-way analysis of variance (ANOVA) indicated no significant difference among all six classes in terms of inquisitiveness (F (5, 205) = 1.05, $p = 0.39$). However, significant differences were noted in both caring (F (5, 205) = 2.64, $p = 0.02$) and self-control (F (5, 205) = 3.33, $p < 0.01$). Because students were randomly assigned to heterogeneous groups, the predicted differences in caring and self-control strengths among the six classes was expected to be small. Thus, Scheffe's post hoc test was the most appropriate test, which is used to infer notable differences (Mchugh, 2011). Significant but minor differences were noted in caring strength between three pairs of classes, specifically Class 1 and Class 3 (mean difference = −0.42, $p = 0.05$), Class 3 and Class 6 (mean difference = −0.48, $p = 0.01$), and Class 5 and Class 6 (mean difference = 0.41, $p = 0.01$), and in self-control strength between two pairs of classes, specifically Class 2 and Class 6 (mean difference = 0.53, $p < 0.01$) and Class 3 and Class 6 (mean difference = 0.58, $p = 0.001$).

Table 6.1 Descriptive statistics of character strengths of heterogeneous ability classes

Strengths	Class 1 ($N = 38$)	Class 2 ($N = 35$)	Class 3 ($N = 23$)	Class 4 ($N = 36$)	Class 5 ($N = 37$)	Class 6 ($N = 42$)
Inquisitiveness M (SD)	3.46 (0.83)	3.67 (0.79)	3.69 (0.88)	3.38 (0.67)	3.64 (0.84)	3.41 (0.79)
Caring M (SD)	3.94 (0.68)	4.10 (0.62)	4.36 (0.53)	4.02 (0.74)	4.29 (0.65)	3.88 (0.75)
Self-control M (SD)	3.03 (0.55)	3.37 (0.54)	3.42 (0.90)	3.06 (0.66)	3.17 (0.78)	3.94 (0.68)

Character Strengths in Homogeneous Ability Classes After Grouping

Table 6.2 presents the descriptive statistics and t test analysis results of character strengths after grouping. HAG scored higher on all strengths than LAG. An independent t test demonstrated statistically higher levels of inquisitiveness ($p = 0.04$) and self-control ($p = 0.01$) in the HAG than the LAG. No significant difference was observed in caring strength between the two groups.

In addition to strengths, homogeneous grouping also polarized students in terms of SES. The Levene's test and one-way ANOVA demonstrated no significant difference in the six heterogeneous classes in terms of the education levels of mothers ($F = 1.36$, $p = 0.24$) and fathers ($F = 1.62$, $p = 0.15$). However, the t test indicated statistically more years of education for mothers ($t = -4.57$, $p = 0.0001$) and fathers ($t = -6.12$, $p = 0.0001$) in the HAG than the LAG.

Partial Correlations Between Character Strengths and School Adjustment in Each Ability Group

Table 6.3 presents the results of descriptive statistics for strengths and school adjustment variables. To clarify the longitudinal relationship between character strengths and school adjustment variables, partial correlations were estimated for the HAG and LAG. Age, gender, and years of parental education were set as control variables. Additionally, bootstrapping was used to obtain more robust correlation coefficient estimates (Table 6.4). Self-control was concurrently related to test scores in the LAG ($r = 0.21$, $p = 0.05$). However, no character strength was positively related to test scores in the HAG.

Hierarchical Regressions Linking Character Strengths with School Adjustment

Eight hierarchical regression analyses were conducted to evaluate the relationship between strengths and school adjustment variables in the HAG and LAG. For each dependent variable, a hierarchical regression analysis was conducted considering gender, age, and parental education levels as control variables in the first step. The three strengths were regarded as predictors in the second step to explain variances in the three aspects of school adjustment. Because the age of students in the HAG was the same (13 years), this variable was automatically omitted from the regression model in SPSS 20.0. The results of hierarchical regression models for predicting school adjustment variables in the LAG and HAG are presented in Tables 6.5 and 6.6, respectively.

Table 6.2 T test results on differences between LAG and HAG

Homogeneous groups	Inquisitiveness *M* (*SD*)	*t*	*p*	Caring *M* (*SD*)	*t*	*p*	Self-control *M* (*SD*)	*t*	*p*
LAG ($N = 101$)	3.41 (0.81)	−2.08	0.04	4.01 (0.74)	−1.30	0.19	2.99 (0.70)	−2.51	0.01
HAG ($N = 110$)	3.64 (0.77)			4.13 (0.63)			3.24 (0.73)		

Note LAG stands for low-ability group and HAG stands for high-ability group

Table 6.3 Descriptive statistics for character strengths and school adjustment measures

Variable	α	*M*	*SD*
Strengths			
Inquisitiveness	0.85	3.60	0.81
Caring	0.88	4.19	0.68
Self-control	0.85	3.25	0.72
School adjustment Intra-psychic aspects			
Self-efficacy	0.86	3.49	0.74
Positive emotions	0.99	4.68	1.33
Interpersonal aspects			
Sense of belonging to class	0.98	3.99	0.78
Achievement aspects			
Examination scores	–	68.73	24.37

$^{*}p \le 0.05$, $^{**}p \le 0.01$, $^{***}p \le 0.001$

Self-efficacy explained 45% of the variance in the LAG. In the final model, caring ($B = -0.35$) and self-control ($B = 0.80$) were the significant predictors. The analysis explained 30% of the variance in the HAG. In the final model, the single significant predictor was mothers' years of education ($B = 0.04$), indicating that higher levels of mothers' education were linked to higher levels of students' self-efficacy.

With regard to positive emotions, the variable explained 53% of the variance in the LAG. In the final model, mothers' years of education ($B = -0.15$), inquisitiveness ($B = 0.93$), and self-control were the significant predictors ($B = 0.50$). The negative correlation between mothers' education level and students' positive emotions may be attributed to the education level being generally low ($M = 9.52$, $SD = 3.04$). In the HAG, the regression model did not provide significant results.

Regarding sense of belonging to the class, the analysis explained 39% of the variance in the LAG. In the final model, self-control ($B = 0.73$) was the only significant predictor, indicating that students who behaved themselves or respected classroom rules were deeply attached to their classrooms compared with those who did not. In HAG ($B = 0.46$), inquisitiveness, instead of self-control, was the only significant predictor. The analysis explained 34.9% of the variance in the HAG.

With regard to mathematics examination scores, the analysis explained 24% of the variance in LAG. In the final model, gender ($B = -8.44$) and fathers' education level ($B = -1.80$) were the significant predictors. Gender negatively predicted mathematics test scores, indicating that male students ($M = 85.07$, $SD = 14.03$) scored significantly higher than female students did ($M = 82.40$, $SD = 13.66$). The negative correlation between fathers' education level and mathematics test scores may be attributed to fathers' education level in this group being generally low ($M = 10.45$, $SD = 2.86$), leading to the statistical deviation. In the HAG, no predictor was significant.

Table 6.4 Partial correlations between character strengths and school adjustment variables

Group	Variables	Inquisitiveness	Caring	Self-control	Self-efficacy	Positive emotions	Sense of belonging to class	Examination scores
LAG ($N = 91$)	Inquisitiveness							
	Caring	0.69***						
	Self-control	0.71***	0.58***					
	Self-efficacy	0.39***	0.16	0.64***				
	Positive emotions	0.63***	0.36***	0.61***	0.50***			
	Sense of belonging to class	0.36***	0.22*	0.48***	0.65***	0.41***		
	Examination scores	0.10	0.06	0.21*	0.37***	−0.09	0.20	
HAG ($N = 111$)	Inquisitiveness							
	Caring	0.65***						
	Self-control	0.68***	0.44***					
	Self-efficacy	0.49***	0.33***	0.43***				
	Positive emotions	0.26**	0.16	0.24*	0.36***			
	Sense of belonging to class	0.54***	0.41***	0.34***	0.40***	0.38***		
	Examination scores	0.05	−0.18*	0.12	0.17	0.003	0.04	

Note The control variables are gender, age, mother's education, and father's education. LAG stands for the low-ability group, and HAG stands for the high-ability group

$*p \leq 0.05$, $**p \leq 0.01$, $***p \leq 0.001$

Table 6.5 Hierarchical regression analysis for variables predicting school adjustment in LAG

Predictor	Intra-physic aspects				Interpersonal aspects		Achievement aspects	
	Self-efficacy		Positive emotions		Sense of belonging to class		Examination scores	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	B (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Age	−0.02 (0.83)	0.001 (0.65)	−0.93 (1.41)	−0.35 (1.06)	−0.23 (0.85)	−0.32 (0.73)	0.78 (16.90)	−0.32 (16.89)
Gender	−0.25 (0.17)	0.08 (0.14)	−0.64* (0.30)	−0.19 (0.23)	−0.22 (0.18)	0.02 (0.16)	10.28* (3.5)	−8.44* (3.70)
Father's education	−0.04 (0.043)	−0.04 (0.03)	0.07 (0.07)	0.09 (0.05)	−0.09 (0.04)	−0.09* (0.04)	−1.78* (0.88)	−1.80* (0.87)
Mother's education	−0.002 (0.041)	−0.01 (0.03)	−0.15* (0.07)	−0.15** (0.05)	−0.002 (0.04)	0.00 (0.04)	−0.17 (0.84)	−0.09 (0.86)
Inquisitiveness		0.11 (0.14)		0.93*** (0.22)		−0.01 (0.15)		−0.46 (3.52)
Caring		−0.35** (0.125)		−0.26 (0.20)		−0.10 (0.14)		0.07 (3.26)
Self-control		0.80*** (0.14)		0.50* (0.23)		0.73*** (0.16)		6.26 (3.70)
R^2	0.04	0.45	0.12	0.53	0.11	0.39	0.19	0.24
$\triangle R^2$	0.04	0.41	0.12	0.42	0.11	0.29	0.186	0.05
F	0.97	9.79***	2.90*	13.61***	2.56*	7.65***	4.91**	3.68**
$\triangle$F	0.97	20.65***	2.90*	24.69***	2.56*	13.01***	4.91**	1.84**

Note LAG stands for the low-ability group
*$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$

Table 6.6 Hierarchical regression analysis for variables predicting school adjustment in HAG

Predictor	Intra-physic aspects				Interpersonal aspects		Achievement aspects	
	Self-efficacy		Positive emotions		Sense of belonging to class		Examination scores	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	B (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)	*B* (*SE*)
Age	–	–	–	–	–	–	–	–
Gender	0.00 (0.00)	−0.002 (0.10)	−0.08 (0.23)	−0.06 (0.23)	0.01 (0.13)	−0.01 (0.11)	2.68 (1.7)	−2.38 (1.72)
Father's education	−0.003 (0.02)	−0.01 (0.02)	−0.03 (0.04)	−0.04 (0.04)	0.002 (0.03)	−0.01 (0.02)	0.45 (0.33)	0.45 (0.33)
Mother's education	0.05** (0.02)	0.04* (0.02)	0.08 (0.04)	0.07 (0.04)	0.02 (0.02)	0.01 (0.02)	0.35 (0.29)	0.31 (0.29)
Inquisitiveness		0.19 (0.10)		0.28 (0.24)		0.46*** (0.11)		0.55 (1.81)
Caring		0.10 (0.11)		−0.14 (0.25)		0.22 (0.11)		−3.31 (1.84)
Self-control		0.16 (0.19)		0.23 (0.22)		−0.14 (0.10)		1.93 (1.66)
R^2	0.09	0.30	0.04	0.10	0.01	0.35	0.08	0.12
ΔR^2	0.09	0.21	0.04	0.06	0.01	0.34	0.08	0.04
F	3.57*	7.35***	1.48	1.82	0.46	9.29***	3.29	2.40
ΔF	3.57*	10.22***	1.48	2.11	0.46	17.90***	3.29	1.46

Note HAG stands for the high-ability group. Because the age of students in the high-ability group was completely identical (13 years), this variable was automatically omitted from the regression model by SPSS 20.0

$*p \le 0.05$, $**p \le 0.01$, $***p \le 0.001$

Discussion

Our key finding is that relationships between character strengths and school adjustment variables differed between the LAG and HAG. Moreover, character strengths predicted a higher number of school adjustment variables in the LAG than the HAG. These differences may be attributable to person–context interactions (Magnusson & Stattin, 1998). According to developmental system theories, development is a matter of individual–context relations (Lerner, 2006). Because students in HAG and LAG differed greatly in their social, family, and school contexts, the relationship between their strengths and school outcomes varied.

In this study, strengths played a compensatory role in promoting academic achievement in LAG; self-control was significantly related with test scores in LAG in partial correlation. By contrast, no strengths were significant in HAG. This disparity possibly resulted from controlling parental education in partial correlation analysis and regressions. According to evidence from.

The Program for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS), personality traits (e.g., openness to problem solving and work ethic representing conscientiousness) have no moderate or strong correlations ($r < 0.2$) with student achievement compared with self-beliefs (e.g., confidence and self-concept) and SES variables (e.g., parental education) (Lee & Stankov, 2018). IQ and personality factors (e.g., conscientiousness) predicted school achievement (Barton et al., 1972; Butcher et al., 1963; Laidra et al., 2007) only when parental education was not controlled for. Because parental education was already low in LAG, controlling for this variable had no effect on the results of partial correlation and regressions.

Furthermore, the regression results demonstrated that no character strength was significantly related with test scores. However, these results may not necessarily mean that strengths are not related to achievement because this relationship may be indirect. Tang et al. (2019) reported that strengths fully mediated the relationship between inquisitiveness, self-control, and academic achievement in adolescents. Wagner and Ruch (2015) revealed that some strengths indirectly affected school achievement through teacher-rated positive classroom behaviors in both primary and secondary schools.

Character strengths also compensate for the disadvantages experienced by LAG by facilitating positive emotions. Our findings demonstrated that in LAG, inquisitiveness had the strongest relationship with positive emotions, followed by self-control. However, no character strength was significant in the HAG. In research on the sociology of emotions, lower SES was associated with fewer positive and more negative emotions (Gallo et al., 2005; Jakoby, 2016). Additionally, control and strain contributed to the association between SES and positive effect (Gallo et al., 2005). In this study, inquisitiveness and self-control were corelated with positive emotions in the LAG but not the HAG because parental education was controlled in regression models.

Regarding self-efficacy, self-control was a significant variable in LAG, but none of the three strengths were significant in HAG. Because the LAG mostly comprised low-SES students, these character strengths can be regarded as protective factors for most such students.

The relationships between character strengths and sense of belonging to the class differed between the groups. Our findings revealed that self-control was the single predictor in the LAG and that inquisitiveness was the only predictor in the HAG. These results are incongruous with previous findings indicating that caring strength was related to the interpersonal aspects of school adjustment (Shoshani & Slone, 2012; Wagner, 2018). This may be because these studies have assessed friendship instead of sense of belonging to the school or class. Friendship/peer acceptance considerably differed from sense of belonging to a community in definition. Friendship involves companionship, support, and intimacy (Mendelson & Aboud, 1999) whereas sense of belonging is driven by not only peer acceptance but also shared beliefs and goals and opportunities for involvement and mutual influence (Petrillo et al., 2016). Consequently, sense of belonging to class may be influenced by strength of self-control or inquisitiveness, which possibly helps students engage with and take the lead in collective activities.

Our findings extend existing theories of character strengths and school adjustment by uncovering their relationships in the context of the ability grouping framework. The patterns of relationships differed between the LAG and HAG. In the LAG, self-control predicted self-efficacy, positive emotions, and sense of belonging to the class and inquisitiveness predicted positive emotions. In HAG, however, only inquisitiveness significantly predicted the sense of belonging to the class. The results suggest that character strengths are key individual protective factors that assist students when internal protective factors (i.e., from family) are limited. The results also help mitigate a long-standing bias against ability grouping that it created problems of equity and equality, especially for already disadvantaged groups (Hamilton & O'Hara, 2011; Oakes, 2008; Roscigno, 1998). Tieso (2003) argued that ability grouping is neither the friend nor the foe that it has been labeled. When combined with curricula that have been created based on students' interests, learning styles and abilities, grouping can lead to significant improvement in students' achievement. We'd like to add to her argument that when combined with curricula that have been created based on students' character strengths, ability grouping could play a more positive role in promoting their school adjustment.

Our findings also have critical implications for school policymakers and classroom teachers. SES-induced disparities in education can be reduced by promoting internal and external protective factors. When ability grouping is applied, schools should nurture strengths systematically and differentially in students (e.g., self-control in LAG but inquisitiveness in HAG).

The current study had some limitations. First, this study was limited by its research design. Data on character strengths and school adjustment variables were collected separately at Time 1 and Time 2. Hence, tracing longitudinal changes and the cross-sectional interplay between them was impossible. Second, our definition of groups may have been too coarse grained: because the top 50% scorers were assigned to the

HAG and the bottom 50% to the LAG, a medium ability group was not defined. Third, because the data were collected from only one school, similar results may or may not be obtained with reference to the variables and grouping mechanism in other samples. Hence, future studies should have both cross-sectional and longitudinal designs and recruit a more representative sample. The role of character strengths in school adjustment should be further explored in randomized controlled trials. Researchers can also identify the value of character strength for students with particular difficulties, e.g. covid-19 affected students (Duan et al., 2022a), students with physical disabilities (Duan et al., 2022b),

Conclusions

Given the extensive evidence demonstrating the influence of ability grouping on student achievement and well-being, understanding the underlying difference between high-track and low-track students and identifying protective factors for each group are vital. This is the first study examining the role of character strengths in school adjustment under the ability grouping framework. We observed that character strengths explained the difference between the HAG and LAG. Moreover, the patterns of relationship between character strengths and school adjustment differed between the two groups. If ability grouping is implemented to promote student success and well-being, character strengths should be dealt with differentially alongside learning ability, prior knowledge, and other explicit differences.

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Part II
Teacher Perspectives on Well-Being

Chapter 7
Teacher Perspectives on Positive Education: Hwa Chong Institution's Journey

Edwin Lim

Abstract This chapter reports the results of a study that examined the implementation of positive education in a secondary school in Singapore. The study sought the views and experiences of the educators (i.e., teachers and teacher-leaders) who were directly involved in the school's implementation of positive education. The study also focused on the strategies implemented and the outcomes of positive education in the school. The study was interpretivist in nature and applied a qualitative longitudinal case study methodology. The sample comprised 10 educators, who were selected purposively to provide variability. The qualitative data included individual semi-structured interviews and focus group discussions, which were supported by document collection and classroom observation. The data was analysed using grounded theory coding techniques. The empirical findings reveal that the ways in which positive education is conceptualised and implemented impacts teacher practice.

Practitioner Points

- Strategies employed to facilitate the practices of positive education need to be driven by the desire to foster student well-being and strength of character. In this regard, a whole school approach to positive education was identified as key in facilitating and embedding successful strategies in areas such as positive discipline, leadership development, rituals, relationships and communication into the school culture.
- Positive education programmes and activities need to be designed with educator input and investment, and the application and implementation of the strategies need to be mindfully and intentionally carried out by educators for the desired impact to be achieved. These measures would, in turn, enable educators to feel connected to those programmes and make meaning of them. Therefore, personal and professional development of educators would affect the quality and extent to which positive education can be effectively implemented in schools.

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Positive education, or the application of positive psychology in education, has been a rapidly growing movement in schools internationally over the past decade (Green et al., 2011; Norrish, 2015; White & Waters, 2015). Moving from the broader to the local context, several schools in Singapore have embedded positive education practices into their student development initiatives, in conjunction with the city-state's education policy shift towards character enhancement and social emotional development of students. This study sought the views and experiences of educators (i.e., school teachers and teacher-leaders) who were directly involved in the implementation of positive education at the secondary section (Grades 7–10) of one school, which is Hwa Chong Institution. The study was interpretivist in nature with the main aim of generating theory grounded on the perspectives of educators to explain the process of implementing positive education in the Singapore education setting, with the goal of enhancing current practices.

Positive Psychology and Positive Education

Positive psychology's emergence into prominence occurred during Martin Seligman's tenure as president of the American Psychological Association in 1998 when he made a call for an increased focus on what makes life worth living. The focus of positive psychology is well-being (Seligman, 2011) and research highlights an increasing recognition of the importance of well-being globally, with the realization that a rise in economic growth over the decades has not been commensurate with an increase in happiness and life satisfaction of its people (Easterlin et al., 2012; Helliwell et al., 2012). This renewed appreciation of well-being as a global imperative is underpinned by the 2011 United Nations resolution to promote additional steps that better capture "the importance of the pursuit of happiness and well-being in development with a view to guiding their public policies" (United Nations, 2011, para. 8). This further reinforces the importance of positive psychology, which has implications and relevance for different domains of life, such as education.

A review of the relevant empirical literature has revealed that in various places and contexts, there have been different positive outcomes (e.g., an increase in the well-being) for schools and students who have undergone various programmes; namely, the Penn Resiliency Programme (Gillham et al., 2008), the High School Positive Psychology Programme (Seligman et al., 2009; Waters, 2011), and the Strath Haven Positive Psychology Curriculum (Seligman, 2011). Studies have also investigated the development of school-wide approaches to positive education in Geelong Grammar School and St. Peter's College (Vella-Brodrick et al., 2014, 2015; White & Kern, 2017; White & Murray, 2015). Results revealed that students in these two schools demonstrated stronger flourishing in a whole spectrum of areas, lending credence to the proposition that a whole school approach is more effective and desirable than disparate approaches. In the Asian context, only a few empirical studies have investigated the impact of positive education (King et al., 2016).

Research focusing on positive education has been primarily quantitative in nature, with the data being obtained mainly from students (Gillham et al., 2008; Seligman et al., 2009; Shoshani & Slone, 2012; Waters, 2011). However, considering the importance of a more holistic approach to empirical studies in positive education, there is a need to carry out more qualitative studies, to understand in-depth the why and how and the very voice from which positive education reaches the students—the educators themselves. Moreover, the countries that have been the focus of empirical literature in positive education are primarily located in the Western contexts (e.g., the United States of America, Australia and the United Kingdom) (Seligman et al., 2009; Shoshani & Slone, 2012; Waters, 2011). Very limited research (e.g., Caleon et al., 2017; King et al, 2016) on positive education was done in Asia, with hardly any in the Singapore context. To address these gaps in the literature, this study examines positive education as it is adopted and practised in a Singapore school.

Positive Education in Singapore Schools

Positive education may not explicitly be a policy direction of the Singapore's Ministry of Education (MOE) but it is aligned with the principles of MOE's Character and Citizenship Education framework. Apart from Hwa Chong Institution, the schools that adopted positive education include Westwood Primary School, Da Qiao Primary School, Northbrooks Secondary School, United World College of South East Asia, Singapore Management University and Singapore University of Social Sciences. The engagement with positive education in Singapore schools has been practised to varying degrees in recent years. However, according to Ong (2013), positive education needs to be infused and embarked upon more holistically in the schools' curriculum and culture for a sustained impact in enhancing well-being, and there is a need for an implementation that is more "systematic [and] evidence-based" (p. 5).

Hwa Chong Institution, building on its earlier Student Development initiatives to nurture students' character development and other aspects of holistic growth, has sought to adapt and implement positive education in a way that allows it to be infused into various aspects of school life. The secondary school section (Grades 7–10) of the institution piloted positive education in 2011 in one of its four consortia,[1] named 'ProEd', comprising about 400 students, which makes up a quarter of the student population from Grades 7 to 10. ProEd has designed and implemented the practice of incorporating positive education into the language used and also the mind-set and programmes of the whole consortium through the 'Positive Relationships, Positive Language, Positive Action' plan. This plan includes fostering positive student–student and student–teacher relationships, speaking the language of positivity and

[1] The secondary school section of Hwa Chong Institution is divided into four consortia (namely, Aphelion, iSparks, Ortus and ProEd), with about 400 students (ranging from Grades 7–10) in each consortium. This enables closer alignment and monitoring of the holistic development processes and outcomes of students over their four-year journey in the secondary school by teachers in their particular consortium.

practising positive behavior. Subsequently, the programme has also been extended to and practised in varying ways by the other consortia in the school.

There is significant effort in Hwa Chong Institution to apply positive education into various aspects of school life in a reasonably holistic and structured manner. This enables the school to both fulfill the aims of the MOE's Character and the Citizenship Education framework and add value to its current practices. Hwa Chong Institution's experience is unique in being one of the first schools in Singapore to implement positive education through the students' secondary school journey.

Research Objectives and Research Questions

As outlined, positive education has been receiving increased attention recently. However, there have been few published qualitative studies done on the topic, specifically on educators' perspectives of positive education—which are features of the present study. The central research question for this study was as follows: What are educators' perspectives on positive education? In addressing this question, the intention was to generate a theory to explain the process by which educators make sense of, understand, implement and experience positive education.

The central question was augmented by the following guiding questions.

1. What are the intentions of educators engaging in positive education? What reasons do they give for their aims or intentions?
2. What strategies do educators apply for realizing their aims and intentions? What reasons do they give for utilizing those strategies?
3. What do the educators perceive as the significance of their aims or intentions and their strategies? What reasons do they give for this?
4. What outcomes do the educators expect (for themselves and their students) from pursuing their aims or intentions? What reasons do they give for these expectations?

Methodology

This study is located within the interpretivist paradigm as it sought to understand "how people define events or reality" and "how they act in relation to their beliefs" (Chenitz & Swanson, 1986, p. 4). The study applied purposive sampling (Punch, 2009), with the selected sample taken from educators engaged in positive education at Hwa Chong Institution's ProEd consortium. The sample educators comprised teachers (one male and six females) and also teacher-leaders (two males and one female) who exercised different leadership roles but also undertook some responsibilities in teaching. Of the 10 educators who participated in the study, one had less than 5 years of teaching experience, five had 6–10 years of teaching experience, and

four had more than 10 years of teaching experience, and their practice of positive education ranged from one to five years.

The methods of data collection included individual semi-structured interviews, a focus group discussion, document collection and non-participant observations. Data was gathered in an iterative process to follow up themes as they arose. Semi-structured individual interviews were the primary means of data collection. The interviews allow access to "people's perceptions, meaning, definitions of situations and constructions of reality" (Punch, 2009, p. 144), which this study sought to investigate. The focus group discussion with selected teachers was conducted early to allow group interaction among participants: This approach was done to yield insights into issues that would inform subsequent individual interviews as to what follow-up questions to ask participants during the subsequent individual interviews. Document collection was conducted as it provided a wealth of data for authentic educational research (Punch, 2009; Sarantakos, 2005). The collected documents included the school's overall strategic direction for positive education, teaching materials and online documents. The documents served to provide added insights which was analyzed in tandem with interviews and data collected via other methods. Unstructured non-participant observation, which was aided by a guiding checklist of focus items, was employed as a means to generate further questions for data gathering. Observations were made of a variety of areas where positive education was practised, such as workshops, assemblies and programmes such as service learning and the community involvement programme.

Data collection and analysis were carried out in tandem, in line with the interpretivist research approach (Strauss & Corbin, 1990). The principle of theoretical sampling was practised, whereby subsequent data collection was guided by theoretical directions that arose from the data analysis (Punch, 2005). Analytic induction was used in this study to raise the level of abstraction and to identify relationships between concepts (Punch, 2009). The data analysis included coding to attach meaning to data, identifying themes and patterns (Sarantakos, 2005), and memoing to theorise ideas and their relationships to enable ideation and conceptual elaboration (Glaser, 1978; Miles & Huberman, 1994).

Findings and Discussion

This chapter presents the findings of the study and how they have expanded the existing body of knowledge on positive education. The focus is on the empirical findings pertaining to the strategies for implementing positive education and the outcomes of positive education at the secondary school level.

Strategies Employed

In discussing how positive education has been incorporated into the school programmes or activities, an important insight shared by all the teacher-leaders and nearly all of the teachers is that the various strategies comprise the "context and platform", which in turn provide the impetus to practise positive education. These participants indicated that they sought to give students a transformational journey where students do not merely participate in the various activities or programmes, but also grow through those, thus becoming young men of greater character and well-being. Following the basic tenets of 'Positive Relationships, Positive Language and Positive Action', the ProEd consortium employs various strategies, namely: positive discipline; leadership development; rituals; positive class culture; positive communication; affirmation; and relationships.

Positive Discipline

Many educators indicated that they practice a concept called 'positive discipline'—a theme which arose from the findings. When a student commits a disciplinary offence, he is asked to reflect on what happened, what specifically he did wrong for which he needs to take responsibility, why it was wrong, and what he needs to do to make it right (which includes undergoing the consequences). He will be counseled by a teacher and held accountable for making amends accordingly. The shared view of the educators is that this approach moves the students' focus away from their wrong-doing or the consequences of their actions, and on the opportunity to transform, which may include building or restoring a relationship with the student they have wronged, in order to become a better person.

The ProEd consortium has, as a flip-side to discipline, created a system named AURA (Award for Unity of Relationships Activities), which tracks and rewards good deeds to complement the school's demerit point system. Many educators saw great value in this approach, explaining that, while the demerit point system gives students a penalty when they do something wrong, the AURA system awards students for 'being caught' doing what is right. Personal growth and transformation are perceived to be paramount. The inspiration for the model was taken from the Harry Potter series, where students can earn points for their respective houses.

Leadership Development

Leadership, another key theme which emerged, was recognised as being very important for students, with programmes to develop it acknowledged by most of the participants as a valuable platform to provide opportunities for self-discovery and growth. The participants noted that the programmes include the following for ProEd:

- "Leaders for a Week programme", which begins at the start of the year when the students join the consortium at Grade 7. All students in each class have the chance to be appointed to the Class Management Committee to run affairs on behalf of the class for one week.
- "Secondary 1 Annual Camp", which is an outdoor orientation camp for the new Grade 7 students. The organizing team comprises 15 Grade 9 students, with the assistance of about 45 Grade 8 facilitators. The team is supervised by three Grade 10 students from the organizing team of the previous year.
- "Passing the Torch", which is an event where senior classes share with their juniors their reflection of the lessons that they learnt in the past year and what they wished they knew at the beginning of the year when they were in their juniors' position.
- "Leadership Forum", which is a panel discussion where representatives from the various student leader bodies of the consortium field questions from their juniors about leadership roles, responsibilities and experiences in the consortium, to raise awareness and excite their juniors towards taking on leadership opportunities.

Leadership programmes were perceived by the key ProEd teacher-leaders to be challenges that provide students with opportunities for them to develop character and experience PERMA. The educators seek to communicate to students that leadership is "a disposition, not a position", whereby what is important is not the appointment that one holds but rather the character that one exercises and the person one grows to become in the process. A key theme that arose is the desire and intentionality of educators behind their implementation of these programmes—they wanted to shape the students' character and foster their well-being.

Rituals

The positive education programme at Hwa Chong Institution includes building rituals into school life. The common perspective of the ProEd educators is that rituals foster a sense of community and strengthen relationships. The main set of rituals surround food at different junctures throughout the year—such as 'Tau Huay Party' (eating of bean curd to open the year) and 'Lo Hei' (communal tossing of Chinese salad to usher in the Lunar New Year) in Semester 1, and 'Free Ice-Cream Day', 'Youth Day Lunch', and 'ProEd Feast' in Semester 2. Focusing on the concept of "a family that eats together stays together", these food rituals were specifically designed with the purpose of building and drawing attention to the importance of community and relationships.

Positive Class Culture

Most of the ProEd teacher-leaders and the majority of teachers expressed the shared belief that the broader practice of positive education in the consortium needs to begin at the microcosmic community of the classroom level. In this regard, they saw value

in the consortium's efforts to build and celebrate a positive class culture, which is a key aspect of positive education (Low, 2017).

The participants shared that to build a positive class culture, at the beginning of the year, each class establishes a set of values or character strengths that they plan work on for the rest of the year. For instance, a teacher-leader shared the example of how one class chose the character strengths that they wanted to collectively develop and formed the acronym 'CHISEL' (Curiosity, Hope, Integrity, Social intelligence, Excellence, Leadership), with the intention of sculpting each other and being moulded by learning from experiences to become better individuals and a more flourishing class community. A Grade 9 class undergoing the Structured Integrated Programme (known as SIP for short), which comprised students from the previous Grade 8 year who had the most challenges academically, had Strength, Integrity and Passion as its class values—thus putting an empowering spin to an otherwise stigmatising acronym of SIP.

The participants highlighted another practice to develop a positive class culture—the Class Culture Review, which takes place annually during a consortium assembly to facilitate growth. As the author witnessed during an observation of one such assembly, student representatives of the Class Management Committee of each class reviewed their previous activities and plans for the year. They shared their reflections by doing a self-critique of their strengths and weaknesses in various aspects, such as the activities they organised for their class and their class culture. Reflections of the students on their class culture included the behaviour and attitude their class generally exhibited and the extent to which they developed the character strengths and values they had set out to cultivate. This emphasis on and thorough reflection of class culture to foster learning demonstrates the importance that has been placed on it by the educators.

Positive Communication

Communication is another key emergent theme in this study. The use of language is perceived by most of the educators to be important in creating a more encouraging environment and positive school culture. It was observed by some of the participants that, in Asian cultures, the expression of concern can be crouched in a "negative" language, which includes reprimanding students for their misdemeanours or highlighting their weaknesses for correction. One of the participants noted that for many teachers in Singapore, negativity is justified in the name of honesty; but she disagrees, noting that "we can look at it honestly from a negative perspective or honestly from a positive perspective". Participants described a variety of situations in which positive language was used, with a number of themes emerging, including informal development, self-reflection, holistic development, and inspiration and positivity. Some examples of positive communication shared by the participants are outlined below.

CCE Digital Portfolio. According to the teacher-leaders, the students, in both ProEd and other consortia, adopt positive self-communication through the CCE (Character & Citizenship Education) Digital Portfolio. The participants shared that

the Digital Portfolio is an informal developmental artefact maintained by the students to help them document their learning and to reflect on the knowledge, skills and values that they have learnt through the various student development programmes. Students can also showcase a range of their products, including documents, presentations and photos on these activities. The CCE Digital Portfolio comprises a systematic and purposeful curation of students' work, thoughts and feelings that highlights their learning journey, with a reflection of all their life lessons or values learnt. Both the teachers and students can monitor the accomplishments and skills development in various categories classified under the four Personal Development Domains—Scholastic, Emotional-Cultural, Moral, and Resilience Domains (Ng, 2016). For example, after various sports, arts and academic events or camps were concluded, the students were urged to reflect on their character strengths using a "Me at my Best" exercise, where they examined what made them "shine" in their particular event, and considered ways to replicate this experience by using their signature strength(s) that brought out the best in them.

It was explained to students by the educators through the course of the year that reflecting on their experience is important because it helps the students make sense of and find meaning in their experiences and, in doing so, become more aware of themselves and their environment (Tan, 2014). This positive self-communication is perceived by most of the educators as helping students complement experiential learning in consolidating their leadership experiences and developing the disposition and abilities. Though a few teachers felt that for students to do the required reflection in the CCE Digital portfolio (on the various programmes) takes up time—most teachers appreciate its purpose and value.

Student-Led Forum. The Student-Led Forum (SLF) is, according to all teacher-leaders and a number of teachers, an invaluable platform for the exercise of positive communication. A teacher-leader even pointed out that the SLF was one of the features that was most admired by other schools when she shared the work of Hwa Chong Institution on positive education at a conference.

The educators pointed out that during the SLF, every student is asked to share with his parents, his Form Teacher and co-Form Teacher on how far he has gone in his learning journey at the school. This is very different from the typical Parent-Teacher Meetings held by all schools in Singapore (once or twice a year) where the Form Teacher would report to the parents the progress of the student and point out his strengths and weaknesses—often done without the student present. In SLF, the student takes the leading role, and is facilitated by the Form Teacher. Going through the preparation process calls on the student to do self-reflection and thereby develop a clearer sense of himself, his strengths and weaknesses, and his aspirations and plans how he can achieve them. The reflections that the students would have done in the CCE Digital Portfolio often comes in handy for this purpose.

A video artefact the author reviewed, which demonstrated a SLF session in ProEd, featured three phases: (1) sharing of a significant experience and the lessons or values learnt; (2) sharing of goals & aspirations (academics and co-curricular activities); and (3) engaging in conversation about strengths, areas for improvement and how parents and teachers can support the student to help him work towards his aspirations. As a

participant highlighted, the SLF presents an opportunity for parents to clarify what the students presented and affirm them. The conversation during the SLF focuses more on holistic development and differs from the typical academic or behavioural issues surfaced at most Parent–Teacher Meetings in other schools in the country. This is seen by educators to be useful in the cultivation of mindset and skills necessary to prepare the student for the challenges of the twenty-first century. Such a constructive three-way communication platform among students, parents and teachers was also perceived by the participants as nurturing better parent–child relationship, teacher-student relationship, and even teacher-parent relationship (Low, 2016).

Affirmation

A strategy used by most of the educators is affirmation, which they regarded to be an example or type of positive language. However, some educators took the view that affirmation goes beyond language to include non-verbal types of affirmatory behaviours of teachers, as discussed below. To begin with, affirmation by the teachers does indeed comprise edifying positive words being used. For instance, it was observed by the author that one teacher, during lesson time, sought to encourage the "weak" students by highlighting their improvements. Another teacher was also observed as making effort to affirm by focusing on the positives in giving formative feedback to students on their assignments. Several teachers believed that what is focused on "expands", so when they focus on their students' strengths, they are actually helping them to leverage and maximize those strengths, while drawing too much attention to negatives can be exasperating to students.

In addition, non-verbal ways of appreciation were also used by many teachers to affirm students. For example, a lower secondary teacher got students to give 'appreciation stars' on a decorative board where they could affirm their classmates for doing them a favour or any general good deed. The teachers noted that this helped the students to feel proud of their classmates whom they are affirming and also feel grateful to classmates who have affirmed them, thus further promoting class relationships and identity.

Celebration to affirm was also often used by another teacher with students in her form class (i.e., the class the teacher is supervising). Whether it was the students getting good grades for a particular subject (that she may or may not have taught), or celebrating someone who had won a competition or gotten promoted in their co-curricular activity, the teacher would get her students to update the affirmation tree, as a way to counter negativity and promote positive emotions.

Another teacher highlighted how he affirmed the weekly class management committee in the Leaders for the Week programme, taking note of the good work they have done. He sought to profile their good work, taking photos and placing them on Facebook so that they would feel appreciated, and at the end of every rotation, they had "a little appreciation ceremony" in the class, where the boys would get together and enjoy snacks.

All in all, most participants saw the many programmes and events not merely as ends but also as means to a positive education end—strategies to help students to discover, learn and grow. But according to many teachers and all the teacher-leaders, the extent to which they were effective and successful in doing so would be contingent on one important factor: relationships—their relationships with the students, and the students' relationships with each other.

Relationships

There was a prevalent opinion among the participants, whether teacher-leaders or teachers, young or old, and new or experienced: Relationships were highly fundamental as a strategy. According to one participant, "ultimately, it's got to do with relationships". The closeness of relationships is felt by many, who noted that "ProEd is like a family". Such views were explicitly mentioned by several teachers and teacher-leaders. In fact, for some teachers, relationships are more important than academic achievements in their priority list, where the focus "is not so much on the actual skills or content that I teach but rather... on building the student–teacher relationship". The teacher-in-charge of the student council in ProEd sought to help his student leaders understand that relationships are the root purpose of why they should do what they are doing. He wanted to help his student leaders realise that in organising events for the school, it is not about delivering events, but to serve their schoolmates and influence their lives. The students learn to be relationship-focused and not to be merely task-oriented in efforts to get the event successfully organised.

The majority of the educators, besides discerning that relationships are a strategic platform to practise positive education (being part of PERMA), also saw relationships as a desired outcome of positive education, where it is perceived that the strategies of positive education can facilitate relationship development. Even positive discipline, as mentioned earlier, is perceived as "an opportunity to build relationships in order to be better". Improved relationships are seen as a goal of positive discipline; and in turn, it is seen that the benefit that will accrue from the process of building relationships or the improved relationships is the transformation of the students into better persons.

Other Consortia

Though the focus of this study was the ProEd consortium, the teacher-leaders who were interviewed emphasised that the other three consortia have also been actively involved in various aspects of Student Development and positive education. In fact, it was noted by the teacher-leader driving positive education for both sections of the school that the other three consortia were also engaging in positive education without necessarily labelling their efforts as such: "So there's more (positive education) being done than what is being documented. That's for sure".

The findings reveal that the strategies employed by the school to facilitate the practice of positive education were driven by the desire to foster student well-being

and strength of character. The above findings also illuminate how a whole-school approach to positive education embeds successful strategies in areas such as positive discipline, leadership development, rituals, relationships and communication into the school culture. In the next section, the findings demonstrate the outcomes of positive education on students and educators, and what can be done to maximise strengths and enhance the school's current implementation of positive education.

Positive Education Outcomes

This part of the chapter presents the participants' perspectives on the outcomes of positive education and what can be done to improve its current implementation.

Impact on Educators

The educators described how positive education has helped them to practise self-care and look after their own growth and well-being. Most educators believed that positive education has facilitated their personal growth to some extent and in different ways: from becoming reflective and self-aware, to managing their own emotions better.

The educators indicated that positive education has also helped them in improving their relationships with others; for example, being more sensitive to their colleagues and being more perceptive about the needs and development of students, which, in turn, helped them in relating and dealing with students. For instance, one teacher mentioned that when students have conflicts in class and do not pay attention, her understanding about teenagers, acquired through positive education, has led her not to take the students' actions to heart and get unduly upset, and be able to respond calmly and proactively instead of reactively to their behaviour. All in all, the educators felt that positive education has played a major part in building who they want to be as educators, thereby helping them to determine what is important to them, and giving them a sense of purpose.

Student Well-Being

All participants from the ProEd consortium noted that positive education has changed the culture of their consortium and, as a result, changed the students. They observed that positive education has provided a lot of emotional and social resources that can be utilised to build students' confidence, relationships, and sense of identity and belongingness to the consortium and the school. As a result, positive education has been the platform for the cultivation of a positive learning culture and environment where students feel safe, affirmed and a part of a family.

The common view of participants is that positive education has helped transform students who were struggling and had behavioural problems. For instance, for

Secondary 3 (Grade 9) students who were in the Structure Integrated Programme (i.e., the class comprising underperforming students who had low motivation and academic achievement), positive education has had a transformative impact. A participant who worked with these students noted that "the positive experience affected their own outlook in life" and it has translated into more pro-social, proactive and responsible behaviours. The educators also noted that growth through positive education was evident for the student councilors. The participants observed that these student leaders learned to shift from being event-focused to being development-oriented, where the focus is not on the success of the event they had organised but rather on how they have grown in their character and competencies in the process, and how they have helped their peers or juniors learn, mature and build relationships.

Student Results and Motivation to Study

According to the teacher-leaders, the benefits of positive education has also extended to the academic realm. The positive consequences can be inferred from the performance of individual students, particularly those who were previously struggling but later improved by "leaps and bounds from being the underperformer(s) of the class to becoming the top". It can also be seen in the ProEd consortium as a whole, where the overall mean subject grade of students showed significant improvement.

Besides the observed improvement in academic results, positive education was also perceived to have had an impact on student motivation. It was noted by a few teachers that the students developed a greater sense of ownership and responsibility in their studies. Rather than being externally motivated and opening their books because their parents or teachers told them to do so, many students engaged in their studies because they wanted to achieve. With students having a better attitude for their studies, many teachers have also found their students complaining less and demonstrating more eagerness in their quest to improve. One teacher noted that when under-achieving students were making improvements in their studies, their classmates also became more motivated to excel. He believed that when the learning becomes more effective in the classroom so that the "weaker ones" improve, "even those who are really doing well feel encouraged", and the overall motivation level of the class is lifted.

Conclusion and Implications

This chapter examined the strategies and outcomes of positive education in a Singapore secondary school. The results of this study shed light on how a school adopts a holistic approach to positive education by employing and integrating successful strategies in different spheres of student life, and aligns school programmes to the principles of positive education, thereby nurturing a positive education school culture. The findings also reveal how intentional educator input, buy-in, and implementation

of strategies are essential to a successful school execution of positive education: These suggest that personal and professional development of educators would be valuable. In addition, there were positive outcomes observed in relation to the implementation of positive education, for both educators and students alike, with the impact on the latter extending from well-being to academics.

Two main features distinguish this study from other studies. Firstly, it is a qualitative study, which focused on the perspectives of educators (and not students) and was set in an Asian, specifically Singapore, context. Secondly, this study, as it highlights a school that already had various measures in place to develop character and well-being before the introduction of positive education, provides insights on how positive education can complement or supplement existing school efforts, and how the school can continue to do so. This has implications on how schools can work out the alignment of positive education with their existing initiatives, and ultimately establish their own brand of positive education. Hence, this study is especially applicable to schools which already have student development frameworks and programmes in place before being introduced to positive education (which is the case for the vast majority of schools in Singapore), and are seeking to discover how positive education can add value to their existing efforts.

The present study provides important directions for future research. Firstly, future studies can examine and address roadblocks that educators may face in implementing positive education, such as juggling limited time and resources they have amidst different priorities. Secondly, other studies can also explore better strategic coherence in a whole school approach. Thirdly, future research can also focus on developing educators personally and professionally to ensure their flourishing and role modelling for more pervasive and sustainable implementation of positive education in the school community.

Positive education is increasing in prominence, and there have been suggestions by researchers to further its application. Seligman and Adler (2018), for instance, have proposed allowing more creativity for educators, based on their knowledge of their students, to “design local and contextually resonant interventions” (p. 70) with ongoing measurements to make the gains of positive education sustainable. Despite areas for improvement, it is believed that education is in the midst of a revolution, with positive education likely to produce increasingly promising outcomes that will advance its goals (Seligman & Adler, 2018). Along with the increasing appreciation of positive education world-wide, it is worth noting that the Singapore Positive Education Network (https://www.spen-network.com/) has recently been established in Singapore to bring together local academics, policy-makers and educators to share and promote positive education in the Asian region. This recent development, along with the results of the present study, paint a bright future for positive education in Singapore and beyond.

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Chapter 8
Teacher Emotions Do Predict Teacher Effectiveness: Empirical Evidence from Chinese Teachers

Junjun Chen, Yingxiu Li, Lan Yang, and Wendan Xu

Abstract This chapter reports a study that explored the relationship between teacher emotions and their job performance using 676 teachers in China. The two self-reported instruments, The Teacher Emotion Inventory (TEI) and the Teacher Job Performance Instrument (TJPI), were utilised to examine the relationship between emotions and performance. Results demonstrated that both the in-role and extra-role performance of the TJPI were positively related to pleasant emotions (e.g., love and joy) while extra-role performance was negatively associated by unpleasant emotions (e.g., fear). Fear was the only factor that was negatively related to extra-role performance. Two interesting findings are that sadness was positively influenced by extra-role performance and anger was neither related to in-role performance and extra-role performance. The results in this study provide implications on how teacher emotions influence on their job performance, which has implications for teacher education and professional training programmes aimed at enhancing teaching effectiveness.

Keywords Teacher emotion · Teacher job performance · Quantitative survey · China

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Practitioner Points

- Promote the impact of positive emotions on in-role job performance;
- Alleviate the impact of negative emotions on in-role job performance;
- Alleviate the impact of negative emotions on extra-role job performance.

Teaching is considered as a high-risk profession worldwide (Capone & Petrillo, 2020; Chen, 2019a). Emotions similarly drift and shadow above teachers' lives which unavoidably destroy their well-being, as well as their teaching quality and effectiveness (Chen, 2020a). On other occasions, teacher emotions are vastly controlled and affected by comradely competition, standardised performativity, increasing accountability, and immediate appraisal (Acton & Glasgow, 2015). Whilst in the 'undeniable chaos' which has been demarcated in one study (Hargreaves & Fullan, 2020), the COVID-19 pandemic has vividly altered and interrupted the professional lives of teachers, for example, when handling new modes of teaching, new technologies, unexpected uncertainties, and new demands and expectations that now exist on a global scale by working in isolated conditions (Hattie, 2020). Currently, the nature of teaching and adjustments on education have unavoidably resulted in the increased emotional demands in everyday teaching with teachers being made to feel more exposed and vulnerable.

Aligning to the Chinese context, there have been a sequence of continuous reforms (for example, assessment and curriculum reform) currently being employed in the Chinese context. It has been reported (King & Chen, 2019) that a paradigm shift is now being experienced by teachers in China from a teacher-centred teaching style to a more learner-oriented style in which increased teacher academic accountability and teacher effectiveness are expected to an increased extent within such a high-stakes orientated context. A meta-analysis project conducted in China involving 116 studies (Yang et al., 2019) found that Chinese teachers have continually encountered a higher level of negative emotions including burnout. It is now, therefore, the time for teachers to adjust their work and turn it 'on its axis' so that teaching operations and, perhaps, achieving effectiveness during the turbulent time currently being experienced are maintained (Hargreaves & Fullan, 2020). For teachers, meanwhile, as first-line agents, there are expectations for them to be influentially critical, as well as paying attention to their student emotions in order for their well-being and teaching effectiveness to be enhanced (Chen, 2020b).

The acknowledgement of the significance of teacher emotions in education has led to a growing interest on teacher emotions (see Chen & King, 2020; Chen et al., 2020b). There is evidence indicating that teacher emotions are associated with their efficacy (Chen, 2019c), instructional choices (Chen, 2017) and well-being (Burić et al., 2019), as well as the emotions of students (Frenzel et al., 2018), the teacher-student relationship (Taxer et al., 2019), and the outcomes of student learning (Burić, 2019). Recently, teacher emotion research has also been extended to special education (Yang et al., 2020). However, aside of various studies on teacher emotions across educational settings, one pivotal consequence of teacher emotions, teacher performance, seems to be not to have been well explored.

When considering the increased demands and expectations with regard to the development of students, particularly in the high-stakes context of China, teacher job performance, which is connected closely to student outcomes (Hwang et al., 2017), is a vital matter for stakeholders, including principals, parents, policymakers, as well as society (Alrajhi et al., 2017) to be concerned about. Conducted research has only exposed an indirect connection between teacher emotions and effectiveness. Teachers with more positive emotions, for example, can develop improved ways in their teaching methods to be handled so that improved learning outcomes are achieved (Taxer & Frenzel, 2019). Additionally, it has been reported that high-quality teachers effectively regulate their own emotions (Beltman & Poulton, 2019) as well as having the tendency to accomplish more teaching efficacy and well-being (Berkovich & Eyal, 2019). More apparently, Chen (2019c) found that pre-service teachers' emotions significantly affect their practicum performance via teacher efficacy. However, how in-service teachers' emotions affect their teaching performance is still lacking in the empirical field. In response to these concerns and gaps, the aim of this chapter is to examine the relationships between teacher emotions and teacher performance using a sample of Chinese teachers.

Conceptual and Theoretical Framework: Teacher Emotions and Teacher Job Performance

Teacher Emotions

Teacher emotions can be categorised as internalised feelings that persist inactively within the boundaries of their own bodies but are essential to how they relate to and interact with their students, colleagues and parents at school (Farouk, 2012). Scholars appear to have agreement on the dichotomous characteristics which are commonly associated with teacher emotions. Teachers' emotional accounts indicate that they have experienced different types of emotions. These emotions can be categorised into two contrasting discrete types, including positive and negative emotions, with prominent basic emotions being identified. Enjoyment, for example, was found to be the most frequent positive emotion (Frenzel et al., 2016), whereas anger and anxiety have been reported to be the most frequently found negative emotions. A comparative study (Hong & Zhang, 2019) which was conducted with kindergarten teachers working in China and Norway, showed that positive emotions (e.g., enjoyment, happiness) are linked with the progress and performance of children, while negative emotions (e.g., anger, anxiety) are related to children's behaviours and the expectations of their parents. Similarly, primary teachers in Hong Kong recounted that they enjoyed the student trust that they received as well as collegial support from their colleagues but also, simultaneously experienced feelings of anger owing to student misbehaviours (Wu & Chen, 2019). In a study conducted in Australia,

Gallant (2013) reported that two primary teachers endured feelings of guilt (alongside shame), anger, love and passion with the interactions that they experienced with their students and colleagues. Based on such research evidence on the dichotomy of teacher emotions, the Teacher Emotion Inventory (TEI) was developed and validated in the Chinese context and has been adopted in other contexts (Chen, 2016; Chen et al., 2020a). Note that the TEI only captures the most salient emotions in teachers' professional life, and may not cover all emotions that teachers experience in the Chinese context.

Teacher Job Performance

In the organisational literature, job performance is attributed to a collection of behaviours that an individual makes over a particular period of time towards the achievement of an organisation's goals (Motowidlo, 2003), which is the central result in workplaces. In educational settings, teacher job performance can be specified as the actions or performances of a teacher within their school so that educational goals are achieved as a result (Hwang et al., 2017). Job performance encompasses two types, namely extra-role and in-role (Hwang et al., 2017; Motowidlo, 2003). In-role job performance is treated as the performance of an employee related to the obligation of their ritual role (Borman & Motowidlo, 1997). In-role job performance behaviours are attributed to an individual's behaviour under the rules existing within formal organisations. The behavioural output assists in achieving an organisation's goals and the resulting performance can also achieve the role of an organisation's expectation, which can also be termed as "task performance" (Katz & Kahn, 1978). The behaviours of teachers' in-role job performance involve them implementing appropriate teaching events, guiding students' in developing a suitable sound personality, being involved in educational research, participating in administrative and academic works, and fulfilling other required job-related duties (Lu, 2019). Extra-role job performance, in contrast, denotes the achievement of additional working behaviours outside the ordinary requirements of an organisation (Hui et al., 1999). The behaviours of extra-role job performance normally include behaviours being performed outside of the class and/or outside of the school, such as assisting colleagues in solving their work difficulties, engaging in the development of school affairs, assisting the school in promoting teaching innovation, and coordinating conflicts between schools and communities (Chen et al., 2007). Based on these two dimensions, the Teacher Job Performance Instrument (TJPI) was developed and has been adopted in other contexts (Chen et al., 2007; Lu, 2019).

Linkages Between Teacher Emotions and Teacher Job Performance

From the empirical perspective, few studies have investigated the relationships between teacher emotions and teacher job performance. Existing literature has revealed that pre-service teachers' emotions significantly affected practicum performance in the Chinese context. More specifically, the participants with more positive emotions performed better than their peers with more negative emotions (Chen, 2019c). Some studies have examined the links between teacher job performance and job satisfaction. Akinlolu et al. (2019), for example, identified the correlated relationships between job satisfaction and job performance in secondary schools in Nigeria. In addition, Li et al. (2018) found job satisfaction positively affect teacher job performance in the Chinese context. Likewise, a study (Afshar & Doostia, 2016) with a sample of Irani English teachers revealed that satisfied teachers significantly performed better than their dissatisfied counterparts.

From the theoretical perspective, the Job Demands-Resources (JD-R) theory is considered to be one of the most persuasive theories that addresses the role of individual and contextual circumstances in moulding individual and organisational products (Bakker & Demerouti, 2017). Teacher emotions could be understood as individual conditions and job performance as an individual outcome. In addition, Diener et al. (2020) recently proposed a theoretical account by reviewing dynamic features of positive emotions (i.e., intraindividual variability, reactivity, inertia, cycles, feedback loops) and their relation to psychological and work outcomes. Hence, the JD-R theory and the account of positive emotion at work in this study were enlisted to understand how a teacher's emotions influence his/her job performance. Taken together, grounded on the conceptual and theoretical evidence, this study examined the relationship between teacher emotions and teacher job performance. The research question is listed as follows:

How do teacher emotions relate to their job performance?

The two hypotheses are proposed as:

H_1. Teachers' pleasant emotions positively relate to their job performance.

H_2. Teachers' unpleasant emotions negatively relate to their job performance.

Method

Participants

In total, 855 teachers in one province in China were administered an online survey. All of the participating teachers were well-informed about the project's purposes and procedure, that their participation was voluntarily, and about data confidentiality

Table 8.1 The demographic of the participants

Demographic	Total	Percent (%)
Sex		
Female	597	88.3
Male	79	11.7
Age		
≤25	86	12.8
26–35	277	41.2
36–45	172	25.6
>45	138	20.5
Education background		
Below bachelor degree	186	27.5
Bachelor degree	472	69.8
Master degree or above	18	2.7
Teaching level		
Kindergarten	138	20.4
Primary school	383	56.7
Secondary school	124	18.3
High school	31	4.6
Teaching year		
1–10 years	362	53.6
11–20 years	110	16.3
>20 years	204	30.2

before completing the questionnaire. 676 valid surveys were received with a response rate of 79.1% (Table 8.1).

Measures

The Teacher Emotion Inventory (TEI)

The 20-item TEI selected from Chen (2016, 2019b) includes six dimensions consisting of two positive (love and joy) and three negative emotions (anger, sadness, and fear). The TEI measures teachers' emotions concerning their working experience. A 6-point frequency rating scale was used (e.g., 1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *about half the time*, 5 = *frequently*, and 6 = *almost always*). The TEI was developed in primary schools in the Chinese context and adopted at other educational levels with high reliabilities.

Teacher Job Performance Instrument (TJPI)

The TJPI was developed based on the Elementary School Teacher Practical Intelligence Scale (ESTPPC) (Chen et al., 2007) in the Taiwan context, which was originally drawn from Katz's (1964) theory and distinguished into the extra-role and in-role domains with 20 items. A revised 6-point scale replaced the original one with a 5-point to examine the working performance of teachers (e.g., 1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = somewhat agree, 5 = agree, and 6 = strongly agree). The TJPI has been adopted in the Taiwan context with stable reliabilities.

Analyses

There were four steps involved in the data analysis procedure. First, missing data were calculated with the expectation maximisation algorithm performed in SPSS 26. Reliability analysis was used to calculate the Cronbach's coefficient of each variable. Second, the descriptive statistics including means (M) and standard deviations (SD) were also obtained in SPSS. Third, two measurement models were trimmed using Confirmatory Factor Analysis (CFA) performed by Mplus with maximum likelihood estimation. Fourth, Structural Equation Modelling (SEM) was then used to test the relationships between teacher emotions and job performance. Use of SEM, rather than regression analysis, tests the relationships that items load onto their designated domains and/or domains load onto depended variables driven by the theoretic framework (Graham, 2008).

Results

The Measurement Model: Teacher Emotion Inventory

The Teacher Emotion Inventory (TEI) with 20 items consists of five inter-correlated factors (i.e., love, joy, anger, sadness, and fear) via a 6-point scale. CFA was performed to further determine the structure of the model and a sufficient model fit was identified ($\chi^2 = 669.57$; $df = 155$; $\chi^2/df = 4.32$; CFI = 0.922; TLI = 0.905; RMSEA = 0.073, and SRMR = 0.064) (see the left hand in Fig. 8.1). The factor loadings of all the items were greater than 0.52 (Table 8.2). The love factors refer to teachers' enjoyment of teaching work and students' learning. The joy factors are identified by teachers' inspiration from students' achievement, teaching practice, and support from school administrators. Anger mainly refers to the negative emotions of teachers in unequal treatment, teacher-student relationship, and students' attitude. The sadness factor focuses on students' behaviour and education policy, and the fear factor concerns teaching, promotion, and teacher-parents relationship.

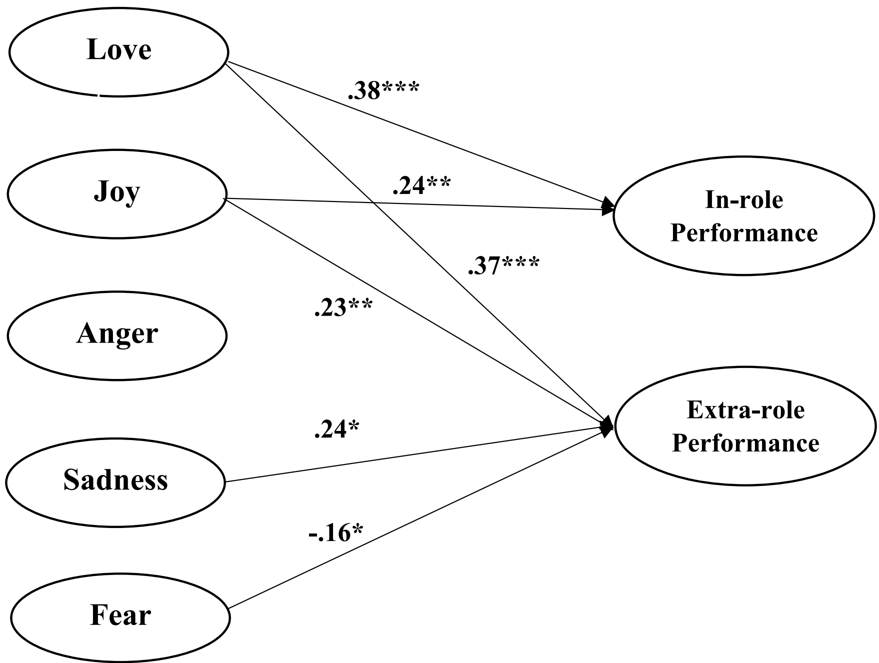

Fig. 8.1 The structural model of teacher emotions and teacher job performance. *Note* Intercorrelations and error terms were removed for simplicity

Tables 8.3 and 8.4 indicate the descriptive results including *M*, *SD*, and Pearson correlation coefficient from SPSS.

The Measurement Model: Teacher Job Performance Instrument

Similar to the TEI, the TJPI was estimated by a 6-point scale and the CFA revealed an adequate model fit, that is $\chi^2 = 763.01$; df = 154; χ^2/df = 0.91; CFI = 0.95; TLI = 0.938; RMSEA = 0.076, and SRMR = 0.037 (see the right hand in Fig. 8.1). The factor loading of the items in the in-role performance items and the extra-role performance shown in Table 8.2 revealed a significant validity. In-role performance mainly regards the personal teaching behaviour of teachers, and extra-role performance refers to the initiative of teaching between teachers and schools, colleagues, and parents.

Table 8.2 TEI and TJPI Items and Factor Loadings

Scale and items	Factor loading
Teacher emotion inventory	
Love	
I love being a teacher since I can gain a sense of achievement	0.70
I love being a teacher because it is a profession which can obtain respect and recognition from society	0.65
I love to make contributions to my student learning	0.61
I love to witness my students' growth	0.58
Joy	
I enjoy adopting innovative ideas in my teaching	0.73
I feel motivated when my students apply what I taught	0.72
I feel motivated when obtaining support from school leaders	0.71
I am glad to see my students engage with learning	0.69
Anger	
I am indignant when the society and/or public blame teachers without any evidence	0.68
I feel annoyed when my students do not get along well with me	0.66
I feel angry when I am treated unfairly (i.e., workload, salary, and appraisal)	0.60
I feel annoyed when I fail to optimize my students' learning attitudes	0.58
Sadness	
I feel frustrated when my professional beliefs are conflicting with the requirements of education reforms	0.82
I am frustrated if my students don't take ownership for their own learning	0.76
I feel frustrated when my professional beliefs are conflicting with the requirements of education reforms	0.72
I feel frustrated by the stiff policies and system	0.68
Fear	
I feel pressurized from irrational parents	0.80
I feel pressurized from heavy workload (e.g., preparation work)	0.79
I am worried about whether I could gain the appropriate opportunities for improvement	0.67
I am worried about how to improve student achievement	0.52
Teacher job performance instrument	
In-role performance	
Before the official teaching, I will prepare properly to smoothen the teaching process	0.85
I often work hard to enrich my knowledge about the curriculum and teaching	0.84
I will flexibly use various teaching resources during teaching	0.82
I will always find opportunities to educate students' living skills	0.80

(continued)

Table 8.2 (continued)

Scale and items	Factor loading
I will flexibly adjust the content of the teaching so as to meet the learning needs of the students	0.79
I often complete works ordered from my superiors within the prescribed time limit	0.77
I will select the appropriate supplementary teaching materials	0.75
When teaching, I will keep my teaching pace smoothly	0.74
I will properly use my body language with graphic tone while teaching	0.73
I share teaching experience with my colleagues	0.73
Extra-role performance	
I will do my best to assist the school in promoting teaching innovation	0.83
I will proactively promote the merits of the school	0.83
I will proactively assist students with difficulties in their families	0.80
I will be proactive in help new colleagues adapt to the work environment	0.80
I will proactively coordinate the teaching and administrative matters with my colleagues	0.78
I will be happy to assist my colleagues in solving their work difficulties	0.77
I will engage in the development of school affairs and give some constructive views toward the development of the school	0.77
I will be engaged in action researches when I have spare time	0.75
I will help to coordinate the conflicts between schools and communities	0.74
I will proactively reflect the opinions of parents or communities to the school	0.72

Table 8.3 TEI, TJPI means, SDs, and Cronbach α

	M	SD	Cronbach α
Teacher emotion inventory	4.47	0.93	0.87
Joy	5.52	0.57	0.81
Love	5.28	0.71	0.78
Anger	4.05	1.12	0.76
Sadness	3.89	1.17	0.85
Fear	3.66	1.09	0.78
Teacher job performance instrument	5.24	0.61	0.97
In-role performance	5.28	0.58	0.94
Extra-role performance	5.20	0.63	0.94

Table 8.4 TEI, TJPI intercorrelations and correlations

Scale		Teacher Emotion					Job performance	
		Love	Joy	Anger	Sadness	Fear	In-role	Extra-role
Teacher emotion	Love	–						
	Joy	0.66**	–					
	Anger	0.10*	0.24**	–				
	Sadness	0.05	0.19**	0.73**	–			
	Fear	−0.05	0.07	0.56**	0.64**	–		
Job performance	In-role	0.49**	0.48**	0.04	0.04	−0.04	–	
	Extra-role	0.47**	0.47**	0.04	0.05	−0.04	0.86**	–

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

The Structural Model: Teacher Emotions and Teacher Job Performance

A structural equation model in which all paths from the TEI to the TJPI were tested using standardised estimates based on the assumptions. After removing statistically non-significant paths, the revised model indices showed a great model fit, that is $\chi^2 = 2398.53$; df = 706; $\chi^2/\text{df} = 3.39$; CFI = 0.911; TLI = 0.902; RMSEA = 0.06, SRMR = 0.067 (Fig. 8.1). Generally, this model demonstrated that both the in-role and extra-role performances of the TJPI were positively associated with pleasant emotions (e.g., love and joy) while extra-role performance was negatively related to unpleasant emotions (e.g., fear). Noted fear was the only factor that was negatively related to extra-role performance. Interestingly, sadness which positively influenced extra-role performance and anger was neither related to in-role performance and extra-role performance in the TJPI. The TPJI correlation to the TEI ranged from −0.04 to 0.49, while positive emotions had moderate correlations with the TPJI with an average value of 0.48 and the average value of correlation between negative emotions and the TPJI was 0.05. Noted that the TPJI was negatively correlated with fear and highest positively with love in the TEI.

The structural models identified six statistically significant paths out of a possible 10 from the five TEI factors to the two TJPI factors. The beta value of all paths ranged from $|-0.16|$ to $|0.38|$ with an average value of 0.27. The factor of in-role performance had two predictors and both were positive emotions which involved love and joy. Extra-role performance had four predictors including love, joy, sadness, and fear. The result indicates that teachers' emotion predicts teachers' job performance. Firstly, only positive emotions love and joy can predict the in-role performance ($\beta = 0.38$, $p < 0.001$; $\beta = 0.24$, $p < 0.01$). Secondly, extra-role performance can be predicted by both positive emotions and negative emotions except for anger in the latter. Love showed a significant explanatory power and positively related to extra-role performance ($\beta = 0.37$, $p < 0.001$), while fear indicated to be moderately and

negatively significant with it ($\beta = -0.16$, $p < 0.01$). To conclude, teachers' job performance can be generally predicted by teacher's emotions, especially positive emotions.

Discussion

Based on the theoretical and conceptual framework, two hypotheses were proposed with regard to the relationship between teacher emotions and their job performance. In this section, the major findings from the TEI, TJPI and structural models are discussed.

The mean scores from the TEI model may indicate that the participating teachers indicated a higher ranking to positive emotions whereas for negative emotions, they gave a lower ranking. This is a good indicator denoting that these teachers more frequently experienced positive emotions than negative emotions. This finding conflicts previous studies reporting love to be the least experienced emotion and that the three negative emotions were positioned in the middle (Chen, 2016, 2019b). Looking at negative emotions, fear, as the least experienced emotion, not only had the lowest mean score but also large mean differences from the other four emotion factors. This indicates that the items on the fear scale need to be paid special attention to. As expected, the means score of the in-role performance was higher than the extra-role performance in the TJPI model. This finding is consistent with other studies (Chen et al., 2007; Lu, 2019), indicating that teachers from different studies performed better on the in-role aspect that the extra-role aspects.

The structural model responds to the two hypotheses. The first one is that teachers with positive emotions perform better. More specifically, also two positive emotions, joy and love, were positively associated with the in- and extra-role performances. All of these results were expected and consistent with the guidance of Diener et al.'s (2020) model on positive emotions at work. Moreover, the model also tells that the effect of love is higher than those of joy on the extra- and in-role performances. When examining negative emotions, only fear negatively influenced their extra-role performance. These findings are congruent with those from other studies on job satisfaction and job performance (Afshar & Doostia, 2016; Akinlolu et al., 2019; Li et al., 2018). Surprisingly, these participants reported the complexity of sadness in job performance. Sadness in this study was positively related with their extra-role performance. Hypothetically, this unforeseen association might be produced by handling negative matters on teachers and schools from communities and societies including social media reports. While teachers may experience feelings of sadness, their participative conduct remain predicting their extra-role performance. Negative attitudes have been described as often being more associated with practical concerns than ideological opposition (Malinen et al., 2012). "Cultures that emphasized the maintenance of social order—that is, those that were long-term oriented and valued embeddedness and hierarchy—tended to have higher scores on suppression, and reappraisal and suppression tended to be positively correlated" (Matsumoto et al.,

2008, p. 925). Suppression of expressing sadness and the co-existence of sadness, joy, love in relation with job performance might need further exploration. Support is provided in this study for this general belief and adds to the existing knowledge demonstrating the ways in which teacher job performance in the Chinese context is associated with negative emotions (e.g., sadness). It is interesting to realise that anger is not related to any type of job performance. The reasons behind this notion is not known which, therefore, requires more investigation to be conducted in future studies.

Implications

When considering the frequency of increasing teacher academic accountability and negative symptoms between teachers globally, this study's findings appear to be timely. There may be important implications in the present study for teacher emotion research and professional training to teachers' job performance by taking account of the roles of both positive and negative emotions in teaching. The positive predictive effects of positive emotions (love and joy) on in-role job performance as compared to the negative effect of fear on in-role job performance are informative for training programmes or workshops to help teachers promote positive emotions. The results also add value with regard to existing theoretical and conceptual models (e.g., Diener et al.'s positive emotions at work model, 2020; Bakker & Demerouti's JD-R theory, 2017) on the hypothesised connections between teacher emotions and teacher effectiveness using a teacher sample. Policymakers, researchers and practitioners may put particular attention on how positive emotions spark their in-role and extra role performances in practice. The results of this study are also informative with regard to teacher preparation and evaluation. For example, initial teacher training courses and programmes as well as professional development might contemplate the inclusion of instruction in positive and negative emotions in order for teacher job performance to be further enhanced. Likewise, the element of teacher emotion may be considered to be added into the evaluation mechanism.

Conclusion

To conclude, this study has meaningful findings, although they can be considered a modest initial move with regard to the examination of the associations between teacher emotions and performance within their jobs, more importantly, the relationships between teachers' positive emotions and their in-role and extra-role performances. As mentioned above, researchers, educators, policy makers, and practitioners should be cautioned about teacher emotions and the paths between teacher emotions and job performance as identified in this study.

Although with significance, two limitations are notable. First, as this study was cross-sectional, correlational or reciprocal relations, thus, were unable to be deduced. There is a need for longitudinal or experimental studies to be conducted in order to delve more deeply into the more dynamic relationships that exist between teacher emotions and job performance. Second, self-report data were used this study which could have created a bias as such data may or may not have echoed teachers' definite perceptions of their own emotions and job performance. Future studies may consider data triangulation to be used by using interview and observation or other relevant sources of data to minimise this bias. Third, use of the TEI may miss out some other important emotions (e.g., pride, shame, guilt, boredom) as this measurement only captures most saline emotions in teachers' professional life. Fourth, this study did not explore the antecedents of teacher emotions and of the relationships between teacher emotions and performance. Future studies may especially investigate the final two aspects.

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Chapter 9
Providing Autonomy Support in an Asian Context: A Tale of Two Teachers

Bick- har Lam

Abstract Self-determination theory (SDT) posits that autonomous motivation is a critical condition for optimizing human flourishing. In the school context, autonomy-supportive teaching promotes student learning and well-being. In Asian contexts, however, an indispensable part of classroom instruction seems to relate to control, which is conceptualised as the opposite of autonomy-support. While some researchers interpret Asian teachers' instructional practices as authoritarian, increasingly more studies have argued that children in collectivist societies indeed benefit from teachers' 'control'. Some researchers proclaim that autonomy support is more appropriate in Western contexts while control is more important among Asian teachers. However, other studies claim that the need for autonomy-support is universal. This chapter aims to address this debate by reporting a study of the teaching style of two Hong Kong teachers. The mixed-method study was based on classroom observations and interviews of two teachers regarding their teaching styles, and a survey measured the motivation of 67 junior form students who were taught by the teachers. The coding results of classroom observation indicated that the two teachers have largely embodied autonomy support in their teaching, and that minimal controlling behaviour was found in the teachers. Their classroom practice was dominated by *fostering student interest*, with *relatedness support* and *promoting mastery learning orientation* as the dominant features of the two teacher's teaching styles respectively. The two teachers' beliefs and practices showed a strong resemblance to Confucian philosophical ideas, demonstrating the characteristics of *being altruistic (jen), self as relational*, and *self-cultivation.* Their students' motivation was almost equally high in terms of *students' relationships with the teachers, perceived self-efficacy, learning goals*, and *self-handicapping behaviour* (reverse score). The results disagreed with the point of view that Asian teachers are controlling but rather endorses self-otherness as a core cultural norm that makes Asian teachers' autonomy support and teaching style specific to the Chinese culture. Implications for positive psychology and future research directions are discussed.

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Practitioner Points

- An autonomy-supportive teaching style is crucial to fostering students' intrinsic motivation.
- Teachers' autonomy support to students indicates their altruism in teaching
- The features of 'jen' and 'yi' in the two teachers' autonomy supportive behaviour can help catalyse more effective teaching practices.

Introduction

Positive psychology recognizes well-being as an optimized state of living that leads to human flourishing (Peterson, 2006). Teachers' motivating style has emerged as one of the most popular constructs in discussing teaching due to a notable emphasis on well-being in the literature (Lavy, 2020). Motivating style refers to the interpersonal sentiment and behaviour that teachers rely on in teaching for motivating students to engage in and benefit from learning activities (Reeve, 2009). According to Reeve (2016), autonomy supportive teachers identify, nurture and develop students' inner motivational resources, compared to controlling teachers who pressure students to think, feel, or behave in specific ways. 'Autonomy-supportive' and 'controlling' construct the framework for identifying motivating styles. Table 9.1 shows selected empirically validated instructional behaviors of the two styles.

SDT serves as the theoretical basis of motivating style (Vansteenkiste et al., 2020). SDT is an organismic theory that explains eudemonia well-being through integration and regulation of one's self in the social environment. It maintains that individuals can become fully functioning, i.e. flourishing, if they can be afforded the necessary conditions to fulfill three basic psychological needs, i.e. autonomy, competence and relatedness (Ryan & Deci, 2017). Respectively, autonomy refers to the desire to experience choice and freedom, to take control of life decisions; competence refers to the need to experience oneself as effective in dealing with challenges; and relatedness refers to the need to be cared for, connected to, and offer support to others (Vansteenkiste et al., 2020). Researchers that investigated how teachers can

Table 9.1 Autonomy supportive behaviour and controlling behaviour

Autonomy supportive	Controlling
- Nurture inner motivational resources - Provide explanatory rationales - Rely on non-controlling and informational language - Display patience to allow time for self-paced learning - Acknowledge and accept expressions of negative affect	- Rely on outer sources of motivation - Neglect explanatory rationales - Rely on pressure-inducing language - Display impatience for students to produce the right answer - Assert power to overcome students' complaints and expression of negative affect

nurture students' psychological needs have concluded that 'autonomy support' brings multiple benefits to student learning and well-being (Aelterman et al., 2019).

According to self-determination theory (SDT), autonomy determines a person's well-being through regulation. Such regulation process is represented by a taxonomy of motivations that would generate more desirable or less desirable overall functioning outcomes. Intrinsically motivated behaviour is undertaken out of interest, and is volitional in that human beings have high energy available for it (Deci & Ryan, 2000). Extrinsically motivated behaviour is not undertaken out of one's inherent interest, but can be positive or negative depending on how the person regulates such behaviour. A person can identify with the utility and value of engaging in a task even if he or she is not intrinsically motivated, and accept the full responsibility of working on the task. In such cases the person experiences 'autonomous motivation' when doing the task (Deci et al., 1994, pp.121). Both intrinsic motivation and autonomous motivation imply self-determination, which positively contributes to human wellness (Ryan & Deci, 2020). A person's behaviour, however, can be externally regulated by the imposition of external demands. In such cases, the person would feel pressure when working on the task and experience a controlled motivation, which would negatively affect human functioning (Black & Deci, 2000). In SDT, maintaining a greater coherence between one's behaviour and internal state is crucial; and autonomy support optimally facilitates such a regulation process (Ryan & Deci, 2000a).

Congruent with SDT, autonomy supportive teaching is designed to promote students' autonomous motivations (Reeve, 2016). It contrasts with the 'controlling style' which pressures students to behave in specific ways, leading to need frustration and ill-being (Connell & Ryan, 1984).

Is Autonomy Support Universal?

A controversial debate in the research community suggests that autonomy support may not be relevant to learners of eastern countries (Tseng, 2004). This challenges the universality of SDT and questions whether basic psychological need has cross-cultural differences, as well as whether teachers of eastern countries are most controlling and least autonomy supportive.

Reeve et al (2014) proposed a cross-cultural study of eight nations to identify whether teachers' beliefs predict the two motivating styles. The authors assumed that,

> "collectivist culture would on average be more likely to weight group priorities over interests, utlilise a directive and authoritative communication style, pace instruction around their (teachers) own needs and goals, rely on shaming more than on explanatory rationales when making requests, and push students toward societal consensus but away from individual choices" (pp. 107).

Reeve et al. (2014) reported that collectivism predicts a controlling style. However, this study overly relies on teachers' self-reported beliefs. Other studies consistently

recognized autonomy support as a crucial factor of need satisfaction for students across cultural contexts. Taylor and Lonsdale (2010) investigated the relationship among physical education students' perceptions of teacher autonomy support, psychological need satisfaction, subjective vitality and effort in class, on 715 adolescents from the U.K. and Hong Kong. The study's results argued that autonomy supportive behaviour was an important need-satisfying strategy for teachers of both eastern and western cultures. Jang et al. (2009) attested that the basic needs theory model predicted middle-class South Korean students' psychological need satisfaction and positive school functioning, suggesting that autonomy support was salient in this Asian cultural context.

Most of the limited number of classroom studies on teachers' autonomy supportive teaching styles, were based in western countries (e.g. Bozack et al., 2008; Jiang et al., 2019; Reeve et al., 2004). Furthermore, these studies mostly relied on self-report and quantitative measurement (e.g. Wang et al., 2016; Reeve et al., 1999). Studies to address autonomy support for teachers in eastern countries have presented a research gap to be filled and a qualitative study approach is considered more appropriate for this topic.

Are Asian Teachers Controlling?

Research in Asian contexts often projects an authoritarian image of teachers similar to that of a controlling style (Littlewood, 1999), in which students were found to display an unquestioning attitude to what they learn from teachers (Scollon & Scollon, 1995; Llewellyn et al., 1982). A number of cross-cultural studies reported that Chinese teachers generally adopted a content-oriented teaching style (An et al., 2006; Leung, 1995) compared with their western counterparts who favoured learner-centred teaching approaches. Such a typical teacher-centred teaching style was exemplified by Hong Kong teachers (Lam, 2011a; Yeung, 2009). In the last few decades, considerable interest has been shown regarding the paradox of Chinese learners and students in eastern countries leading in international examinations despite the criticisms of how they were taught in schools (Cheng & Wan, 2016). Researchers began to posit that teachers' 'control' may be effective for Chinese learners in the stereotypical perception of Chinese cultures (e.g. Zhu, 2016). A closer examination of Chinese cultural beliefs, especially those relevant to the self and the environment may shed light on Asian teachers' teaching styles.

Philosophy explains the fundamental truths humans have conceived regarding humanity, the world in which they live, and their relationships to the world and to each other. Confucianism is a prevalent philosophy with over 2,000 years of history. It has strongly influenced the cultural development of Chinese regions and many Asian territories. Confucius (551–479 BC), who devoted most of his life to teaching, established human nature as the metaphysical foundation of his philosophy. Confucius proposed that humans are born with fine qualities that constitute one's conscience and moral ethics and that all human persons are capable of becoming

Chun-tze (君子), i.e. a moral ideal man who possesses the goodness of a superior moral self (Ng, 2009).

The virtuous behaviour of Chun-tze is defined by concepts such as jen (仁) (love for others, compassion and benevolence), yi (義) (righteousness), li (禮) (ritual propriety, or courtesy in modern times), and zhi (智) (wisdom). Jen is demonstrated by virtuous altruism, which indicates humaneness. The Chinese character of jen is written as 'a person' beside the number 'two' (仁), denoting the interpersonal relationships that can be realised through loving others (Li, 2008), and is considered the supreme virtue as it forms the basis of all other virtues in refining the self. Yi enables humans to make moral distinctions and follow 'what is right' instead of material gain and self-interest. Li refers to the practice of social norms to refine one's self. Wisdom refers to the ability to perceive situations accurately and to make correct judgements.

In Confucianism, when cultivating a moral self, a man's self is not isolated. The man's self is set in a network of relationships that is responsible for aiding others to attain their perfect state, i.e. 'self transforms itself as it encounters other selves' (Tu, 1999). In other words, as individuals grow, they extend toward increasingly more complex interpersonal and social relationships, by which a 'self-relational' personhood (Tsai, 2001) is established. Thus, 'for a benevolent man, wishing to be himself, he helps others succeed in everything' (Wang, 2004). This sentiment can be incorporated into teacher-student relationships and the situation of learning from friends, by which humanity is promoted (Lam, 2019).

With reference to self-relational personhood, the five disciplines (五倫) further specify five types of societal relationships as the core value of Confucian virtues (Park et al., 2005). These relationships include, in order: the affection between father and son (父子有親), the loyalty between sovereign and subject (君臣有義), the distinction between the roles of husband and wife (夫婦有別), courtesy of the young for the old (長幼有序), and trust between friends (朋友有信). A pervading sentiment among these five disciplines is that of filial piety, i.e. kao (孝), meaning one's respect, obedience, and duty to parents (Kwan, 2000). Confucianism extrapolates the model of all societal interaction from the basis of ideal familial relations (Canda, 2013). As a parent and child would provide for each other's emotional and physical needs, so too should every social relationship give the same consideration to each other. A perfect manifestation of every role in the hierarchy brings about the ideal harmonious society.

In Confucianism, the cultivation of virtuousness is only truly accomplished through 'practice'. Self-cultivation (修養) is a process of finding a balance between 'unadorned human nature' and 'moral and social cultivation', by which humans nurture their character (Peters, 2020). Once the right character has begun developing, it must be nurtured through discipline to regulate one's behaviour (Woods & Lamond, 2011). Self-cultivation thus implies that a disciplining effect is crucial for promoting moral excellence (Wong, 2015). This discipline must be maintained constantly, even when alone, to gradually instil correct moral standards until they become second nature.

In the Confucian tradition, Chun-tze, the moral ideal man, must also be an autonomous person who can master one's own life by acting virtuously, out of affectionate concern for the well-being of fellow humans. Without noting the deep meaning rooted in the philosophy of Confucius, Confucian values have often been translated as a controlling behaviour expression in Asian teachers' classroom practice that negatively affects Chinese learners (e.g., Bond, 1992; Murphy, 1987). This review however postulates that Confucianism directs human living on a spiritual level that leads to human flourishing, but with unique contents suggesting morality and a strong sense of self-otherness.

Current Study

This study intends to fill the research gap of the underrepresentation of research evidence regarding autonomy support of Asian teachers. The results may contribute to the discussion of whether Asian teachers are controlling. An examination of teachers' beliefs and practice and an approach to look at the cultural values of Asian countries was used to explore the topic. This study investigated two Hong Kong teachers' teaching behaviour by a mixed-method study.

Research Questions:

(a) What features of autonomy support behaviour do the teachers demonstrate in the classroom?
(b) What features of controlling behaviour do the teachers demonstrate in the classroom?
(c) In what ways do teachers' philosophical beliefs relate to Chinese cultural traditions?
(d) Do the teachers' philosophical beliefs explain their classroom behaviour
(e) Do students taught by the teachers have a positive learning motivation?

Methods

Participants and Setting

Purposeful sampling was used. Two effective teachers from a secondary school of average to low academic standing were recommended by the school management team based on a general evaluation of the two teachers' teaching styles. The evaluation is based upon the standard of teacher's knowledge including teacher's subject matter

knowledge, pedagogical content knowledge and curricular knowledge. In addition, classroom behaviour including class management, decision making, problem solving, monitoring and support to students are taken into consideration. Effective teachers were selected as the sample for the current study because they represent a subgroup in the teacher population. They represent those who are keen to support students and respond to students' learning needs (Hattie, 2003). By studying effective teachers, this research yields cases that are "information-rich" (Patton, 2005) that can achieve a deep understanding of the phenomena of study (Palinkas et al., 2015). Although a small sample size of two cannot reach data saturation (Guest et al., 2020) to argue for representativeness, the two teachers' story can provide a 'new, deep and nuanced understanding' (Boddy, 2016) on a relatively unexplored phenomenon of Asian teachers' motivating style and suggest reliable indications for the direction in which future research can go. Based on this small-scale study, further studies will be expected to expand the sample size on this subgroup and across other teacher sub-groups until the topic is comprehensively studied.

Classroom Observation

Three lessons, of 50 min, totaling 150 min for each sample teacher, were observed by two researchers and videoed. Lessons of junior forms, i.e. secondary level one and two were included to ensure that the effect of public examination would not override the design of the lessons and teachers' behaviour. The coding scheme of autonomy support and controlling teaching behaviour by Jiang et al. (2019) was adapted for use in coding the observed lessons. It is summarized in Table 9.2.

Coding System

The autonomy supportive coding schemes contain seven behaviour codes including fostering intrinsic interest (A1), fostering relevance (A2), acknowledging students' negative affect and accepting students' opinions (A3), using non-controlling language (A4), promoting mastery learning orientation (A5), relatedness support (A6), and providing meaningful choices (A7). The five controlling behaviour codes including external regulatory control (C1), rejecting negative affect (C2), using controlling language (C3), intruding (C4) and creating ego involvement (C5).

Pilot-coding. A pilot test on the coding system was conducted based on a 30-min extract from each of the teachers. The trial coding results were compared and issues of coding were deliberated and determined, by the two researchers. The two researchers completed the coding separately after this step.

Cohen's kappa was utilized to calculate the inter-rater reliability between the two coders. There was substantial agreement between the two coders' overall judgement ($k = 0.68$), substantial agreement in coders' judgment on autonomy-supportive

Table 9.2 Coding scheme and exemplar codes for autonomy supportive behaviour and controlling behaviour

	Description	Exemplar codes
Autonomy support		
Fostering intrinsic interest (A1)	- Giving encouraging comments on student effort and engaging behaviour - Offering new experience such as interesting teaching aids and activities	- Senator, very good. Ok, well done group 6, can we all give a big hand to group 6?
Fostering relevance (A2)	- Helping students identify personal goals, values, interests, understanding personal utility, and relating to experience	- T: … What will you do? When you come across some difficult words. You have to think, you have to guess, because nobody is with you. You have to guess the meaning of the word
Acknowledging students' negative affect /Accepting opinions (A3)	- Listening to criticisms or expressions of negative feelings - Listening to students' points of views	- He feels upset about this, because…anyway, how about I say sorry to him and Chi-man say sorry to him? Is that ok? Do you feel better now?
Using non-controlling language (A4)	- Using informational language in monitoring learning processes and correcting behaviour	- When your classmates are reading to us, what should you do? Sit properly first, and then you have to listen, don't laugh, can you do it? Ok, go on please, group 1
Promoting mastery orientation (A5)	- Helping students develop skills for mastering knowledge and problem solving - constructing higher-order thinking	- T: For example, my relationship with Peter is good, which means we are friends. When we see each other, we are happy. That is a good relationship. Whenever I see him, I feel angry, so I do not have a good relationship with him. What is relationship?
Relatedness support (A6)	- Responding with empathetic understanding - Promoting warmth, friendship, love and respect	Your voice is very tired instead of energetic, hear this 'en-er-ge-tic', say 'energetic' (the whole class laughed)
Providing meaningful choices (A7)	- Allowing students to work in their own way - Giving choices	- When can you finish and hand it to me? Is it possible today? Is it too tough for you?
Controlling		

(continued)

Table 9.2 (continued)

	Description	Exemplar codes
Relying on external regulatory control (C1)	- Enforcing rules, and deadlines - Exercising penalty and punitive measures	- Group 1 you got all answers correct, you got three marks. Group 2, two marks, group 3, three marks, group 4, three marks
Rejecting negative affect (C2)	- Responding to students' complaints, criticisms, or expressions of negative affect with power assertions	- So what do you supposed to do? (example not from this study)
Using controlling language (C3)	- Pressuring students into compliance by words such as 'have to' and 'must' - Using commands and neglecting explanatory rationales for expected behaviours	- Ming, these cards are not playing cards, don't play with the cards. Ok, listen. Group 1…who is student A? Keep all the cards and the ring. Put it on the desk, don't touch it. …
Intruding (C4)	- Stopping a learning activity on short notice - Shift task and change task abruptly	- Quick, put down all your tools, and tidy up immediately. (example not from this study)
Creating ego involvement (C5)	- Pressuring students to act by creating internal compulsions or feelings of guilt shame, and anxiety, e.g., guilt induction and public criticisms	- On p.35, Tommy, I want you to turn to p35. Where is your book?

behaviors ($k = 0.67$) and controlling behaviors ($k = 0.73$). The disagreed codes from the independent coding were discussed among the two coders, until they come up with an agreed code upon discussion.

Coding Protocol

A coding guide was developed to ascertain the rigour of the coding method.

(a) The researchers should base their judgements on each utterance' for considering a code,
(b) More than one code can be used for coding an utterance
(c) Non-verbal gestures and the use of teaching aids and materials must be considered
(d) Avoid coding based on standard phrases, paying attention to contextual elements

Teacher Interviews

Six semi-structured interviews were conducted to understand teachers' beliefs, concerns, and intentions in teaching. The interviews aimed to identify the interpersonal relationship and motivation regulation system the teachers demonstrated in teaching.

Student Questionnaire. A 26-item questionnaire was distributed to each class for which observation was done regarding *student relationship with the teacher, perceived self-efficacy, learning goals* and *self-handicapping strategies*, by Teacher Involvement Scale (Connell & Wellborn, 1991), Academic Efficacy Scale, Mastery Goal Orientation scale, and Academic Self-Handicapping Strategies (Midgley et al., 2000). The respondents are students from two classes of junior levels, secondary one and two.

Data Analysis

Observation data and interview data. The lesson videos and interview conversations were transcribed verbatim. The numerical coding results of the lessons suggest an index to indicate the emerging behaviour patterns, while the coding results of the interview data suggest the meaning behind teachers' actions, thoughts and beliefs. A codifying process (Charmaz, 2006) was used to identify common patterns and distinctive features that emerged from the data (Houghton et al., 2015). An individual motivating profile was compiled for each teacher, and connections were drawn among different behaviour categories to construct an overall profile to address the first two research questions. Individual coding results were derived to illuminate characteristic behavioural features and differences, with reference to the two teachers' interview responses. The teaching philosophies were examined with reference to the resultant respective motivating profiles to answer the third and fourth research questions.

Survey analysis. Paired t-tests were conducted to compare the difference in student motivation in Chinese Language classes and English Language classes, to answer the fifth research question.

Results

Learning Motivation. Table 9.3 showed that students' learning motivation was equally high in the two classes, the results addressed in the fourth research question. No significant difference was found between the two classes in student relationships with their teacher [$t(29) = -1.453$, p = 0.157], perceived self-efficacy [$t(29) = 0.413$, $p = 0.683$], learning goals [$t(29) = -0.567$, $p = 0.575$] and self-handicapping behaviour [$t(29) = -0.859$, $p = 0.398$]. The results indicated that

overall, students have a positive self which is reflected in their perception of their own ability to achieve outcomes and intrinsic interest in learning.

Teaching Style. 'Teacher C' and 'Teacher E' are used to denote the two participants in this study. While quotes are used in presenting the findings, remarks are given to suggest the types of data specifying the data source, e.g., 'Lesson 1' indicates the transcript of the first lesson being observed, and 'Interview 1' indicates the interview conducted after the first observed lesson. The coding results (Table 9.4) suggested that both teachers embodied autonomy support in their teaching. Teacher E (teacher of English) showed 154 codes on fostering interest (A1) and 127 codes on promoting mastery learning orientation (A5), which featured her distinctive teaching behaviour; she also scored 79 on relatedness support (A6) which suggests another crucial feature. For Teacher C (teacher of Chinese), fostering interest (A1) and relatedness support (A6) characterised her behaviour, with 103 codes resulting for both types. Teacher C scored 27 on promoting mastery learning orientation (A5) compared with Teacher E's score that was almost four times higher. Teacher E scored 32 for fostering relevance (A2) and 16 for non-controlling language (A4), compared with Teacher C who received 8 and 6 codes respectively. For acknowledging students' negative feeling/ accepting opinion (A3), Teachers E and C scored 4 and 8 respectively. Teachers E and C showed 0–2 codes for providing meaningful choices (A7). The overall results showed that both teachers demonstrated autonomy supportive behaviour in teaching which is predominantly featured by fostering interest (A1). Each teacher showed a distinct feature that marked a key difference from each other's style, with Teacher E demonstrating the cultivation of mastery orientation (A5) and Teacher C relatedness support (A6).

Both teachers showed very limited controlling behaviour. Teacher E and C scored 8 and 11 for relying on external regulatory control of student behaviour (C1). For

Table 9.3 Students' learning motivation with respect to the classes taught by the two teachers

Student motivation	Teacher	
	C (n = 30)	E (n = 37)
Student relationship with teacher	4.23 (1.14)	4.70 (1.16)
Perceived self-efficacy	4.48 (1.20)	4.41 (1.24)
Learning goals	4.95 (1.31)	5.16 (1.07)
Self-handicapping behaviour	2.49 (1.25)	2.68 (1.28)

Numbers in parentheses are standard deviations

Table 9.4 Coding results of teachers' behaviour indicating autonomy support and control

Code/teacher	A1	A2	A3	A4	A5	A6	A7	C1	C2	C3	C4	C5
E	154	32	4	16	127	79	0	8	0	8	0	10
C	103	8	8	6	27	103	2	11	0	2	0	1

'A' stands for Autonomy, 'C' stands for Control.

Teacher E, 8 codes were found on creating ego involvement (C5) and 10 codes using controlling language, compared with 2 codes and 1 code for Teacher C respectively.

Composite results. Based on triangulation and integration of multiple sources of data, the teachers' autonomy support was deciphered with reference to Confucian concepts to identify teachers' thoughts and practices.

Discussion

Altruistic Practice and Communal Responsibility in Cultivating the Relational-Self

Both Teacher C and E took a relational approach in their teaching methodology, which was manifested in their altruistic teaching practice and defined by a virtuous mindset and benevolent behaviour. Teachers C and E strove to present themselves as caring, just and altruistic figures to their students. They scored highly on relatedness support (A6); 103 codes for Teacher C and 79 for Teacher E, as illustrated by these classroom scenes:

> Teacher E: In your group, if some of your classmates cannot do it, what should you do? If your classmates say "I can't do it, I can't do it", what can you do?
>
> Student: Help him.
>
> Teacher E: Help him. So, the whole group helps your classmate together. Can you do this, 1E?
>
> Student: Yes. (Lesson 1)
>
> Teacher C: Chun Hung seemed to know. Shall we ask her for help? (Lesson 2)

Both teachers showed fostering interest (A1) as a dominant feature of their autonomy support behaviour. For example, Teacher C shared personal anecdotes with her class and arranged an origami game to teach Chinese writing:

> Teacher C: In fact, you might have used some tricks in origami. You must add your text to make the instructions clear. Now it is about to start. . . (The teacher continued to patrol back and forth and stopped to guide from time to time, and used the camera to take pictures of students' origami outputs) (Lesson 3)

Teacher E introduced game-based activities to make learning interesting:

> Teacher E: . . . the rest of you, look at the cards, think of the pronunciation. Ready? Look at the word, listen. The 1st question is for student A, who is student A? Raise your hand. Ok, the whole group can help student A to find the card, but I want only student A to pick the card and put it up, understand? Group members, please help student A. Are you ready?
>
> Student: Yeah. (Lesson 1)

Both teachers stated that the act of education itself was their goal. It can be inferred that the bulk of their motivation was from their students:

> Teacher C: I myself really like teaching. I like being with the kids. This is something that I'm very certain of, that I like being with the kids . . . the examination system is another thing, but if you ask if I like learning together with the kids at school, I'd say I really like it . . . what I enjoy is being with my students, like friends. Everyone learns together, and the feeling of growing together. (Interview 1)
>
> Teacher E: Right, that's what I think about, like interests, or giving them skills, and definitely giving them successful experiences. Because they must've had a lot of frustration growing up, in terms of learning English. (Interview 3)

Such behaviour also indicates a typical self-relational personhood perspective that serves as the core of Confucian thinking. Teacher C described her 'personhood first' attitude of teaching as:

> Teacher C: Some things, like skills, must be taught, but looking at it another way, 'people must come first'. For example, the students in my class, they know to look out for and help each other, and that actually is exactly the embodiment of morals in education, or perhaps the most important accomplishment in language education . . . (Interview 1)

Teacher C's sense of self-relational personhood was integrated into a classroom environment that required strong moral standards. What she considered as a virtue—cooperation and mutual consideration, demonstrates Confucian virtue thoroughly. Teacher E took a similar approach, but demonstrated it through a different conception regarding the purpose of English teaching:

> Teacher E: Especially my school is a Chinese medium of instruction school. They can only use English in my lesson . . . But then I think, if I want to motivate my student to learn English, I cannot just simply teach them English and just look English as a language, as a subject. I want to let them know it is a tool to help them explore the world. (Interview 2)

Teacher E's understanding of her subject was also relational. The emphasis in her teaching was not simply an egocentric understanding of knowledge, but rather how her students could use it to interact with their own and other communities. By extension, her goal in teaching was not simply mechanical, perfect understanding in isolation, but rather that her students' lives could be enriched through mastery of English. Here again, the relational, communal influence of Confucianism was clearly exhibited. Both teachers, through altruistic practice, saw themselves and the value of their teaching in relation to their students; and subsequently, this informed how and what they taught as part of their own, as well as their guidance of their students' self-cultivation.

Jen and Yi Teaching Styles: Giving Autonomy Support to Learners as Self-Cultivation

Both teachers pushed for high moral standards in their students, a quintessential feature of self-cultivation. Teacher E advocated a Confucian sense of respect for their communal facilities and their peers:

> Teacher E: I keep emphasizing respect in the classroom . . . For example, last week we cleaned the classroom, and this week we learned to follow the rules, but these classes both talk about the same thing, which is respect. We love the school, we respect our classmates, so we keep the place clean. That's why every time, when something happens, I ask them, "I'm reminding you about a very important word, everybody?" And then they remember, and they'll tell me it's 'respect'. So, every problem, if they know to be respectful, they can solve it. (Interview 2)

Traditionally, Confucianism demands respect for elders as part of creating a harmonious and morally upright society. The same rationale applied to Teacher E's understanding of respect, substituting her students' peers and school facilities for a more modern interpretation of li. On the other hand, Teacher C's approach towards discipline fits more neatly into the Confucian framework:

> Teacher C: When I teach Form 1 classes I require a lot of discipline, and a lot of concentration. I will have times where I tell jokes, but the proportion of joke-telling will be much lower in this class because when Form 1 students come in, they must first learn discipline. They're already rowdy, so my approach is first to be strict - first discipline, and then teaching. (Interview 1)

Disciplining the self in Confucianism is vital to achieving higher moral standards. This same attitude was reflected in Teacher C's views of ideal student behaviour.

While both teachers demonstrated altruistic practice, each of them also constantly embodied the virtues they wanted to see their students cultivate. Teacher C drew on love, compassion and benevolence (jen) in her teaching style, and Teacher E drew on the same qualities as C but with a strong hint of righteousness (yi). Teacher C supported and encouraged self-cultivation by modelling 'kindness' and facilitating its cultivation in her students. She scored highly in relatedness support (A6):

> Teacher C: The student may be less capable, then you have to rely on other things, like keeping them company after class. I think it's a sort of chemistry. I really believe that when your teacher-student relationship has improved, then they'll be more attentive during class. Because then they'll know what you want for them. They'll know you worry about them. (Interview 2)

She believed that the cultivation of a supportive community can better oneself, and also believed that closer bonds with her students will encourage them to learn and behave better. By being considerate of her students' emotional needs, Teacher C creates a respectful, harmonious and virtuous classroom environment, ripe for self-cultivation.

Teacher E supported and encouraged self-cultivation in terms of knowledge for students. On top of her altruistic concerns as shown by a high score in relatedness support (A6), she cultivated a strong sense of righteousness by helping students establish what is right to follow, carefully implanting yi in her pedagogical practice. She professed a strong belief that English is fundamentally a tool for self-improvement and wanted students to adopt such values out of intrinsic motivation:

> Teacher E: So. I've tried to let them know what skills they have in these two lessons, to make them do self-learning on purpose . . . interest is also very important, but this is very difficult, because English isn't their interest, and they don't see the need. "Why do I need to learn English?". . . So that's why I make materials myself, in the hopes that I can use some topics,

so they'll get interested in those topics. If they get interested, and want to explore more, then they'll need to use English to know what's in this topic. (Lesson 3)

Her sense of righteousness was demonstrated in her high score (127) in mastery orientation (A5). She coached students to discover knowledge via dialogical feedback, and would prompt and give hints to students when their answers were not perfect, preferring her students to adopt the right learning attitude:

Teacher E: Can you guess? I am looking for my phone. I have lost it in this room. So, what is the meaning of 'looking for'?

Student: Searching.

Teacher E: Yes. Very good. So, 'I have lost it', give you a hint. ... (Lesson 2)

Teacher E also fostered students' sense of competence by giving credits for those who were willing to try and demonstrate the capacities to do so, to reinforce the right learning attitude:

Teacher E: Very good, unfortunately. Tat, can you try?

Student: Unfort…

Teacher E: Ok, when you pronounce this word, can you see, you can't say un for tun ate ly, because this sound come with n, so we pronounce it as unfortunately. Ok, Tat, can you try again? (Lesson 2)

Although Teacher E emphasised knowledge instead of virtue, her backing principle of self-improvement through acquiring good qualities within a community shares the same spirit as traditional Confucian self-cultivation. Teacher E circumvented the solitary nature of the pursuit and acquisition of knowledge by promoting groupwork in her classes, transforming individual practice into cooperative study, echoing Confucius ideas (Lam, 2011b). This put Teacher E's teaching philosophy much closer to the traditional considerations for Confucian self-cultivation, in that they are both pursuing the betterment of the self through interacting with their communities, thus also illustrating the jen component of her philosophy.

Teacher E also treated her students fairly by showing yi, without relying on the authority of her position to resolve conflict. While Confucius believed that a social hierarchy was required to achieve the ideal society, this social hierarchy was not presented as a simple top-down flow of authority, but rather one where the moral selves at every level would check, balance and support the levels above and below (Ni, 2017). In the context of this reciprocal moral relationship, children would not have to obey their parents under all circumstances, but rather should consider how not to let the parents fall into error. This requires a certain degree of critical thinking and confidence, as well as traits regarding justice and fairness, amplified by righteousness, which is something that Teacher E facilitated in her classroom. She also demonstrated this in her use of non-controlling language (A4) and accepting opinions (A3), as well as an incident she recalled from the observed lesson:

Teacher E: He started crying, because I used him as an example, and asked what would happen if he went to the female toilet, and I said another answer could be 'excited'. And then two boys at the back said: "He'd be very excited in the ladies' washroom", and he

> started crying . . . I stopped immediately and addressed this. . . That moment could be a small teaching moment, teaching other than English, to tell the kids that we must be careful when talking . . . in the end another student and I apologized to him and comforted him at lunch. If he still feels that it's not okay and is still mad, then it's his problem, I feel, and he needs to learn from the case and overcome it by himself. (Interview 3)

By demonstrating that a teacher was able to make mistakes and make amends for students, Teacher E not only encouraged her students to think critically about the knowledge they have gained and not to internalize the authority of a hierarchical structure, but also demonstrated an ideal Confucian society, by modelling her own actions on a true Chun-tze, melding of the intentions of Confucianism and the practicalities of a modern schooling system.

Controlling Classroom Misbehaviour and the Cultivation of Internal Self-Regulation

Minimal controlling behaviour was identified among the two teachers, on external regulatory control of student behaviour (C1) and creating ego involvement (C5). Viewed through the lens of self-cultivation, controlling behaviour is necessary to facilitate self-discipline. The following episodes showed the teachers' attempts in stopping misbehaviour:

> Teacher E: Group 2. Group 2. Ming, these cards are not playing cards, don't play with the cards. Ok, listen. Group 1, who is student A? Keep all the cards and the ring. Put it on the desk, don't touch it. (Lesson 1)
>
> Teacher C: Ho, have you finished playing? (Lesson 3)

These situations echo li, itself a means to regulate those who have just begun their journey of self-cultivation. Rather than simply a means of authoritarian control, an adequate amount of controlling behaviour fits in with the concept of self-cultivation.

The act of self-cultivation, being relational, must necessarily be practised by the teachers as well. Teacher E reflected that improvements in her teaching throughout her career primarily served to support more effective learning for students. Teacher C puts it in terms of relational learning:

> C: I believe that lesson plans, besides helping them improve themselves, can also get them to learn how to 'teach-and-learn'. 'Teach-and-learn' is something I learned in the University, which means that learning and teaching are two different things. When I'm teaching, I'm also learning; and when students are learning, they're also teaching me. (Interview 1)

This philosophy is echoed in many places in Confucianism—in self-cultivation, where the relational practice of virtue is a core tenet, but also by Confucius himself, where he stated that he is able to find something to learn from any two people (Lam, 2011b). This discussion suggests the heavy influence of Confucianism in general in these two teachers' teaching styles. The results conclude that altruistic practice, self-relational personhood and self-cultivation appeared to be three embedded traits of the teachers, which proposed a pathway to emulate Confucius, as a virtuous teacher.

Implications

The discussion of the results suggests that the two Hong Kong teachers have largely embodied autonomy support in their teaching, with minimum controlling teaching behaviour. The results imply that autonomy support may suggest cultural significance, and within the same culture, the two Hong Kong teachers' autonomy support has been shown to be dominated by certain common features (i.e. fostering interest and relatedness support). However, autonomy support can also be determined by personal teaching style and subject matter that may cause differences in individual teachers even in the same cultural context (such as promoting mastery learning orientation being the distinctive feature of Teacher E; while relatedness support as the dominating feature of Teacher C).

Furthermore, adopting a Confucian lens for analysis, this study identified that *altruism*, *self-relational personhood* and *self-cultivation* are specific cultural features that form the unique kind of autonomy support used by the two Hong Kong teachers. This finding disagrees with the point of view that Asian teachers are controlling but rather endorses Asian teachers' altruistic responsibilities toward learners and their attempts to make teaching interesting for learners, on top of the notion of righteousness demonstrated in teachers' classrooms that helps learners to adopt fairness and justice in self-cultivation. These cultural characteristics can be used to decipher the phenomena addressed in previous studies regarding teachers' seemingly controlling measures (Hue, 2007), affective relationship with students (Ho, 2003), and teachers' personal commitment (Choi & Tang, 2009; Lam, 2015).

The study contributes to the beginnings of a comprehensive understanding of culturally specific characteristics of Asian teachers' autonomy supportive behaviour. It agrees to the use of an emic approach of study of teachers as it can identify meaningful features of teaching across cultural comparison (King & Mclnerney, 2014). In addition, a qualitative-oriented methodology with multiple data collection methods is recommended for studying teacher behaviour as a cultural phenomenon.

The findings disagree with previous studies suggesting students' blind obedience to Asian teachers as authority figures and that Asian teachers' teaching style was uninteresting (e.g., An et al., 2006; Leung, 1995; Yeung, 2009). It clarifies that social relationships and morals should not be imposing doctrines and controlling tools for insiders who are attached to Chinese cultural values and customs. The teachers in the study demonstrated autonomy support through kindness and relatedness, indicating benevolence (jen) and righteousness (yi) in classroom practice. The teachers also served as moral agents, requiring their students to undertake the responsibility to act properly (self-cultivate) and study with a communal spirit. The teachers, who are effective teachers who demonstrate autonomy support, contributed to fostering students' learning motivation regarding self-efficacy beliefs, learning goals, relationship with teachers, and positive attitude towards learning, similar psychological benefits have also been confirmed by previous studies on supervisors and teachers' autonomy support on student learning conducted in western societies (e.g. Moustaka et al., 2012; Ryan & Deci, 2000b).

The study stimulates ideas to promote research to support human flourishing. First, many researchers assume that Asian people's autonomy may be restrained due to social pressure (Littlewood, 1999). The current study suggests that the two teachers who participated in the study had a strong desire to support students' volitional functioning, helping students become self-determined and self-reliant. It provides a perspective to support the argument of SDT on the universality of autonomy support, however addressing the specific cultural features that may underline autonomy support of teachers in different cultural contexts. As for Asian teachers, their teaching styles can be explained by relatedness, benevolence, and righteousness, with self-cultivation as a core cultural norm that governs the way of life of an autonomous person. Secondly, the study echoes eudemonia well-being across eastern and western civilizations, the altruistic practice of Hong Kong teachers examined in this study may contribute to the development of positive psychology in Asian countries, providing insights for education development and teacher training in Asian regions.

Limitations and Further Studies

This is an observational study with two teachers in an Asian cultural context, which makes it difficult to generalise the findings to other Asian contexts. Moreover, the study used a sample of effective teachers of one school, with a low to average academic background, as a result, would restrict to certain motivating types. The small sample size of this study is designed to provide a new, deep and nuanced understanding of Asian teachers' motivating style, especially on the extent to which Asian teachers represent an autonomy supportive teaching style or a controlling teaching style. Yet, the findings have yet to provide a comprehensive understanding of the phenomena being studied. Future research may replicate the current study in a larger sample size across different types of schools and on different teacher subgroups, in different Asian cultural settings.

Conclusion

SDT stresses autonomy support as the key to students' eudemonic wellbeing outcomes as universal (Sierens et al., 2009). However, autonomy supportive teaching has been queried as unrelated to teachers in eastern cultural contexts. This study explores this issue based on two Hong Kong teachers. It utilises qualitative data to understand teachers' beliefs and practice of teaching to identify teachers' motivating style, and a survey to study students' motivational outcomes. The results suggested that the two Hong Kong teachers teach with an autonomy supportive style that is dominated by fostering student interest, with relatedness support and the cultivation of a mastery learning approach as the dominant features of the two teachers'

teaching styles respectively. Minimal controlling behaviour was identified. These teaching styles were found to work positively on students' motivation. The teachers' classroom practices resemble specific cultural characteristics suggesting Confucian values, namely, *being altruistic, self as relational* and *self-cultivation.* The discussion of the results underscores Asian teachers' virtuous practice, providing insights to help re-conceptualise Asian teachers' teaching behaviour and the benefits of such teaching styles on learners. The study provides a consolidated understanding of the kind of autonomy support given by Hong Kong teachers in an Asian country, and argues for an emic approach of studying teachers' classroom behaviour to address cultural specifies of teachers' teaching styles and behaviour.

The study fills two important research gaps. One is to enrich the quantitative dimension of autonomy supportive teaching behaviour by a qualitative study, the other is to contribute evidence to argue for cultural-specific understanding of Asian teachers' autonomy support in the classroom. The study highlights several crucial ideas related to the philosophy of Confucius that underlines the Hong Kong teachers' autonomy support, which are in line with positive psychological beliefs. Implications to the development of SDT with reference to the universality and cultural specificity of autonomy are discussed, research directions are also suggested. To summarise, the key message of this study is that becoming fully human is to achieve a moral ideal self who should be engaged in both spiritual development and service to the community, which may contribute to future research that supports human flourishing in Asian or non-Asian cultural contexts.

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Chapter 10
Need Support and Need Satisfaction in Arabic Language Classes in Japanese Universities from the Viewpoint of Self-determination Theory

Katsunori Sumi and Akiko Sumi

Abstract According to self-determination theory, teachers' support for students' basic psychological needs facilitates students' well-being. However, most Japanese university teachers, especially Arabic language teachers, are more focused on students' motivation and achievement and are less concerned with well-being. This study mainly aimed to examine the influence of Arabic language teachers' support (need support) on Arabic language students' satisfaction (need satisfaction) in Japanese universities using longitudinal data. Additionally, a new measure to assess Arabic language students' perceived need support was created. The results of the analysis of the data from 324 Arabic language students showed a positive relationship between perceived need support and further need satisfaction. The results also provide preliminary support for the new scale of perceived need support as a reliable and valid measure. Limitations of the study, directions for future research, and implications for Arabic language teachers' need support are discussed.

Practitioner Points

- To maximize students' well-being and achievement, make an effort to support their basic psychological needs for autonomy, competence, and relatedness.
- To support autonomy, give opportunities for students to take initiative, provide choices, consider students' interests and personal goals, and minimize control and pressure.
- To support competence, use positive expectations, provide positive feedback and optimally challenging tasks, and acknowledge improvements.

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- To support relatedness, show understanding, support, care, and respect for students.

Introduction

In Japan, as in many other countries, mental health problems among young people cause great concern and are considered a serious social problem (Irie et al., 2019; King et al., 2016). There is a general consensus that mental health is not merely the absence of mental illness but also the presence of a state of well-being (Keyes, 2007; World Health Organization, 2004). Regretfully, the level of well-being or happiness in Japan is lower than in other developed countries (Helliwell et al., 2020; Holthus & Manzenreiter, 2017). As such, Japanese students must be supplied positive education in school (Norrish, 2015; Seligman et al., 2009; White & Murray, 2015). However, Japanese school teachers have yet paid little attention to positive education.

Even so, most teachers in Japanese universities hope that their students will achieve happiness in the future. Moreover, many teachers answer "yes" when asked if the final aim of education is to master skills to promote well-being. However, in Japan, teachers have paid little attention to positive psychology. In this situation, teachers strive daily to foster students' autonomy, competence, and relationships to produce better class outcomes (Brown, 2014; Sumi, 2020). These efforts, without teachers' intentions, may insufficiently but more directly cause students' well-being. The effect of teachers' efforts is certainly a possibility, based on the self-determination theory (SDT: Deci & Ryan, 1985; Ryan & Deci, 2000b, 2017).

This chapter focuses on supportive environments for the satisfaction of students' needs that would affect their psychological functioning in classes at Japanese universities. The students are Arabic language students in Japanese universities; therefore, the teachers are those teaching Arabic to the students. Basic psychological needs (BPN)—autonomy, competence, and relatedness as defined by SDT—must be satisfied. The satisfaction of students' BPN (need satisfaction) and teachers' support for need satisfaction (need support) have received considerable attention from numerous educational studies based on SDT (Reeve, 2018; Ryan & Deci, 2017). Additionally, need-supportive environments refer to a set of conditions that allow learners to easily obtain useful need support.

In this chapter, BPN, need satisfaction, and need support are first summarized based on SDT. Instructional behaviors to provide need support applicable to Japanese university teachers are also illustrated. Second, the current situation of Arabic teaching and students of Arabic in Japanese universities is reported. Moreover, problems with the teachers' instructional behaviors as need support are described. Finally, the results of an empirical study of the influence of need support on further need satisfaction are presented. Furthermore, from the perspective of positive education, the current situation and the future of Arabic teachers' need support are discussed based on the empirical study.

Self-determination Theory and Basic Psychological Needs

Basic Psychological Needs

SDT is a macro-theory of human motivation, personality development, and well-being that comprises six mini-theories, including the basic psychological needs theory (Ryan & Deci, 2017; Vansteenkiste et al., 2020). This mini-theory focuses exclusively on BPN, which is defined as the innate needs and psychological nutrients necessary for growth, integrity, and well-being across ages, genders, and cultures (Deci & Ryan, 1985; Ryan & Deci, 2000b, 2017).

Autonomy refers to the need for a volitional and self-endorsed experience. When individuals autonomously enact behaviors, they act according to their interests and integrated values, or self-expressively. When individuals satisfy autonomy, they may experience a sense of integrity. When frustrated, they may experience pressure and conflict (Reeve, 2018; Ryan & Deci, 2017; Vansteenkiste et al., 2020). According to SDT, of the three needs, autonomy (or self-determination) is an essential psychological architecture of human nature (Reeve et al., 2018; Ryan & Deci, 2017).

Competence denotes the need to feel effectance, mastery, and progress. This encourages individuals to seek challenges, and maintain and enhance their acquired skills and capacities through activities. When individuals satisfy competence, they may experience a sense of effectiveness; conversely, when frustrated, they may experience a sense of ineffectiveness and failure (Reeve, 2018; Ryan & Deci, 2017; Vansteenkiste et al., 2020).

Relatedness concerns the need to feel connected and significant to and cared for by others. Social interaction is the primary condition for relatedness. When individuals satisfy relatedness, they may have a sense of belongingness and mutuality; otherwise, when frustrated, they may experience loneliness and social alienation (Reeve, 2018; Ryan & Deci, 2017; Vansteenkiste et al., 2020).

Satisfaction of Basic Psychological Needs

In the SDT framework, all three innate needs must be satisfied to facilitate and maintain positive functioning (Ryan & Deci, 2000b, 2017; Vansteenkiste et al., 2020), such as engagement, personal growth, intrinsic motivation, internalization, health, and well-being (Reeve, 2009, 2018). In contrast, low satisfaction or frustration of BSN, i.e., need frustration, which would be experienced through the thwarting of needs, produces a range of negative outcomes, from motivational depletion and aggression to psychopathology (Deci & Ryan, 2012; Ryan & Deci, 2017). Need satisfaction is divided into three types corresponding to BPN: autonomy, competence, and relatedness satisfaction. Such need satisfaction is what positive education should aim to improve (Maulana et al., 2016).

Support for Basic Psychological Need Satisfaction

Much of the research on SDT has focused on elements of the social context that facilitate or thwart need satisfaction (Ryan & Deci, 2000b, 2017); the importance of need support in this context has been emphasized by SDT (Reeve, 2018; Ryan & Deci, 2017; Vansteenkiste et al., 2020). Research on SDT generally indicates that the social environments that support need satisfaction foster positive functioning more than environments in which need satisfaction is unsupported or thwarted (Deci & Ryan, 2012; Niemiec & Ryan, 2009). Moreover, numerous studies provide support for the view that the frustration of BPN is associated with poorer learning outcomes and academic disengagement of learners (Deci & Ryan, 2012; Niemiec & Ryan, 2009). Therefore, need support is considered a practice of positive education (Maulana et al., 2016).

In general, students can obtain overall support for need satisfaction from various resources, including relationships with significant and different individuals such as teachers, classmates, and parents who have distinct functions in early adulthood (Ratelle et al., 2013). In particular, the need support provided by teachers is a main component of need-supportive environments for students (Maulana et al., 2016; Niemiec et al., 2006; Reeve, 2018), and one of the crucial roles in various learning outcomes, as supported by teacher effectiveness research (Darling-Hammond et al., 2002; Kyriakides et al., 2009).

Need support, like need satisfaction, is divided into three types: autonomy support, competence support, and relatedness support (Ryan & Deci, 2017). SDT argues that autonomy support, which many studies have focused on (Jang et al., 2010; Reeve, 2018; Sheldon & Filak, 2008), is central to nurturing educational environments (Ryan & Deci, 2000a, 2017). However, the three need supports are simultaneously valuable for various student outcomes (Deci & Ryan, 2012; Ryan & Deci, 2000b; Sheldon & Filak, 2008). For instance, autonomy support includes affordance of choice and encouragement of self-regulation. The provisions of structure and positive informational feedback are included in competence support. The caring involvement of others and a non-competitive learning structure are components of relatedness support. Various instructional behaviors that enable teachers to provide need support in the classroom have been proposed (e.g., Jang et al., 2010; Niemiec & Ryan, 2009; Reeve, 2002; Ringeisen & Bürgermeister, 2015). Among them, support behaviors applicable to Japanese university teachers are selected and summarized in Table 10.1.

The Current Situation of Arabic Language Teaching in Japanese Universities

For nearly a century, Arabic language teaching in Japan has chiefly been conducted in the domain of higher education (Sumi & Sumi, 2016a, 2016b, 2018). However,

Table 10.1 Support behaviors applicable to Japanese University teachers in the classroom

Basic psychological needs	Support behavior
Autonomy	Provide meaningful rationales Give opportunities for initiative Give the time that students need for self-paced learning Acknowledge students' negative feelings Adopt students' experiences and expertise, and welcome their thoughts Promote task involvement Maximize students' perceptions of having a voice and choice in academic activities Minimize pressure and control Rely on non-controlling informational language Respond to questions and student-initiated dialogue Present interesting, relevant, and enriched activities Nurture inner motivational resources, including students' interests, preferences, personal goals, choice making, and sense of challenge and curiosity
Competence	Present clear goals, rules, and expectations before learning Offer help and supervision during learning Provide relevant information on how to master the tasks at hand Provide appropriate tools and feedback to promote success and feelings of efficacy Provide optimally challenging tasks Encourage students to improve their skills Believe that students are capable of achieving their goals Show positive expectancies to students Acknowledge improvements Enable students to take a practice exam
Relatedness	Satisfy students' desire to feel connected with the teacher Convey warmth, caring, and personal acknowledgment Show a genuine liking for students as persons Respect and value students Show understanding, support, and care for students Provide emotional support, especially if students encounter frustrations Call students by their name Provide support for participating in discussions or exercises Request students' feedback regarding learning contents or lesson-structure Directly address reserved students and encourage them to participate in exercise

Note These behaviors are selected from those which are proposed by Jang et al. (2010), Niemiec and Ryan (2009), Reeve (2002, 2009), Ringeisen and Bürgermeister (2015), Rocchi et al. (2017), Sheldon and Filak (2008), and Su and Reeve (2011)

the number of Arabic courses in Japanese universities is not more than that of other languages, including Russian, Italian, and Spanish. In recent years, approximately 50 universities—less than 7% of all 4-year universities as of 2016—have offered Arabic courses (Sumi, 2020). Arabic courses can be classified into two types: compulsory and elective courses for Arabic major and non-Arabic major students, respectively. Few universities have Arabic major programs, thus most universities offer Arabic courses as electives for non-Arabic major students, who are mostly required to attend one Arabic class per week. Considering these conditions, it can be inferred that the number of Arabic teachers in Japanese universities is currently less than 70, including native Arabic speakers, and that, in 2014, there were approximately 3700 students enrolled in at least one Arabic course in Japanese universities (Sumi & Sumi, 2018). Although research on Arabic teaching and learning in Japan has been gradually developing, the characteristics of Arabic learners are not yet well understood (Sumi & Sumi, 2016b, 2016c, 2018).

At present, most teachers do not rely on SDT or pay attention to positive education in Japanese universities. As such, it is likely that they purposely implement empirically validated interventions and programs to promote students' well-being. However, many of the instructional behaviors that can promote need satisfaction are already exhibited to some degree by teachers in class (Sumi, 2020). The instructional behaviors appear to encourage students' autonomous behavior to a certain degree (i.e., autonomy support), attempt to make them feel adequate competence to acquire Arabic (i.e., competence support), and direct efforts to maintain good relationships between students and teachers in class (i.e., relatedness support). In general, teachers seem to understand the value of these instructional behaviors to obtain better class outcomes, including motivation for learning, student achievement, satisfaction with the class, and class management (Brown, 2014; Sumi & Sumi, 2020). Hence, these need support behaviors may be inadequate to achieve students' positive functioning because these are not validated interventions.

Furthermore, it may be inferred that two negative attitudes of Arabic teachers have a detrimental influence on support for students' need satisfaction. One is toward more appropriate teaching and learning practices in Arabic, while the other is toward students' desire to learn Arabic.

The first negative attitude is illustrated by several facts. Generally, in Japan, it seems that scholars of Arab studies are not very interested in researching on teaching and learning Arabic (Sumi & Sumi, 2018). Most teachers teaching the Arabic language are specialized in the fields of Arab studies, such as history, politics, and religion, not education or learning. Only a small number of scholars have researched Arabic language teaching and learning (Sumi & Sumi, 2018). Moreover, because of limited opportunities for teacher training in Japan, teachers have fewer opportunities to acquire broader and deeper knowledge and skills of teaching and learning; in turn, their interest in teaching and learning is not aroused. This negative attitude toward teaching and learning practices in Arabic likely makes it difficult for Arabic language teachers to acquire better instructional behaviors that may be more appropriate need support.

The second negative attitude is reflected in the inconsistency between the Arabic language skills and knowledge that students desire and those that teachers emphasize (Sumi & Sumi, 2018). Students prefer training in communication-based abilities, such as speaking and listening, whereas teachers emphasize reading, writing, and grammar. Other studies likewise emphasize that most Arabic language teachers, especially Japanese teachers of Arabic, tend to strictly practice the traditional instructional approach which focuses on linguistic forms (Sumi & Sumi, 2018). Arabic instruction in Japanese universities is characterized by teacher-centered rather than student-centered instruction (Sumi & Sumi, 2018). This negative attitude toward students' desire for Arabic learning may prevent Arabic language teachers from becoming aware of students' desires and providing adequate support for the satisfaction of their needs.

The Present Study

Within SDT, perceived need supports or perceived need-supportive environments are the primary determinants of need satisfaction (Olafsen et al., 2015; Reeve, 2018; Ryan & Deci, 2017). A direct positive relationship between need support and need satisfaction has frequently been found in SDT literature (Olafsen et al., 2015; Reeve, 2018; Ryan & Deci, 2017). A previous study indicated increases in need satisfaction among Arabic language learners who participated in an intensive Arabic program in Japan that had been designed to create need-supportive environments (Sumi & Sumi, 2020). Therefore, even among Arabic language students in Japanese universities, the influence of perceived need support on need satisfaction was expected; however, this influence has not yet been examined. This study mainly aimed to examine the relationship between perceived need support and further need satisfaction using longitudinal data.

This study also aimed to create a new measure to assess students' perceived need support and to examine the preliminary psychometric properties of the measure. The new measure was hypothesized to have a three-factor structure corresponding to basic psychological needs. Moreover, it was hypothesized that there would be positive correlations between the scores on the subscales of the new measure and the measures of the three distinct components of need satisfaction because these correlations have been theoretically predicted (Vansteenkiste et al., 2010) and empirically supported in previous studies (e.g., Rocchi et al., 2017; Tafvelin & Stenling, 2018; Zhang et al., 2011). Both the factor structure and correlations provide evidence of the construct validity of the new measure.

Method

Participants

The participants were 324 students who were taking more than one Arabic class per week in Japanese universities (201 women, 123 men; ages 18–31 years, $M = 20.06$, $SD = 2.06$). They were students from eight Japanese universities in various majors, including 123 Arabic major students.

Measures

Need Satisfaction

The Basic Psychological Need Satisfaction in Arabic Learning Scale (BPNS-AL: Sumi, 2020) was used to assess students' need satisfaction. This measure was administered in Japanese and comprises three 3-item subscales to measure each satisfaction of autonomy (e.g., "I am satisfied with deciding the contents and ways of learning Arabic by myself"), competence (e.g., "I am satisfied with demonstrating my ability in learning Arabic"), and relatedness (e.g., "I am satisfied with mingling with people in learning Arabic") based on self-determination theory. The items of the subscales were rated on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The BPNS-AL subscales emerged as separate factors in factor analyses and showed good internal consistency reliability (Cronbach's alphas = 0.85–0.90) and test–retest reliability over four weeks (rs = 0.82–0.90). The construct validity of the subscales was supported by the correlations with the scores for the distinct forms of Arabic learning motivation proposed by SDT and Arabic learning outcomes.

Perceived Need Supports

A measure to assess students' perceived need supports was developed. The items of the measure were constructed by modifying the items of the BPNS-AL to evaluate perceived need support for autonomy, competence, and relatedness satisfaction. The modification was conducted by two professors who were experts in SDT and Arabic language learning. Each item was a short sentence using plain Japanese, like the BPNS-AL. Three Arabic language students in a Japanese university checked the modified items and commented on them. The items were revised based on their comments and further examined by the professors. Finally, several Arabic language students confirmed the suitability of the final items. Nine final items included three items for each of the three needs: autonomy support (e.g., "I feel that I have a suitable environment to decide the content and ways of learning Arabic by myself"), competence support (e.g., "I feel that I have a suitable environment to demonstrate

my ability in learning Arabic"), and relatedness support (e.g., "I feel that I have a suitable environment to mingle with people in learning Arabic"). Like the BPNS-AL, these items were rated on a 7-point response scale. Each subscale score was calculated by summing the responses across subscale items, with higher scores indicating greater levels of perceived need support. This measure was named the Perceived Need Supports of Arabic Learners Scale (PNS-AL).

Procedure

Informed consent was first obtained from the students. Afterward, they were requested to participate in two questionnaire sessions, four weeks apart (Time 1 and Time 2). The students agreed to complete the PNS-AL at both times and BPNS-AL at Time 2. The questionnaires were administered anonymously to the participants outside of class. The two questionnaires of each participant were verified by a password that the participant created and wrote in both questionnaires. Ethical clearance for the study was obtained from the ethics committee of the institutions involved in the study.

Results

Psychometric Properties of the New Measure

A preliminary assessment of the psychometric properties of the PNS-AL was conducted. To confirm the factor structure of the PNS-AL, participants were randomly divided into two subsamples of equal size, that is, Sample A ($n = 162$) and Sample B ($n = 162$). The two subsamples did not significantly differ in terms of sex, $\chi^2(1, N = 324) = 0.04$, and age, $t(322) = 0.43$. For both subsamples, the results of the Kaiser–Meyer–Olkin test of sampling adequacy was good (0.84 and 0.86, respectively), and Bartlett's test of sphericity was significant (χ^2s $= 1286.65$ and 1354.60, dfs $= 36$ and 36, ps < 0.01, respectively). These results indicate that both datasets were suitable for factor analysis. Exploratory factor analysis using principal axis factoring was performed on Sample A. As a result, the eigenvalues above 1.0 were 5.57, 1.30, and 1.10 for the first three factors, accounting for 88.50% of the total variance. The promax rotation method was applied to these three factors. All items had factor loadings of 0.83 or higher on a single factor and 0.09 or lower for all other factors. The items that loaded highly on each factor were the same as those previously hypothesized to constitute the corresponding subscales. The first, second, and third factors corresponded to subscales for perceived autonomy support, perceived relatedness support, and perceived competence support, respectively. Confirmatory factor analysis was conducted on Sample B to confirm the three-factor structure. The

Table 10.2 Means, standard deviations, Cronbach's αs, and correlations between PNS-AL subscale scores at Time 1 and need satisfaction scores at Time 2

PNS-AL subscale	*M*	*SD*	Cronbach's α	*r*		
				Autonomy satisfaction	Competence satisfaction	Relatedness satisfaction
Perceived autonomy support	13.12	3.98	0.93	0.44	0.29	0.30
Perceived competence support	13.27	3.80	0.91	0.31	0.46	0.35
Perceived relatedness support	14.72	4.23	0.95	0.27	0.32	0.64

Note All correlations are significant at $p < 0.01$

goodness of fit indices showed a good fit of the factor structure to the data, GFI = 0.96, AGFI = 0.93, RMSEA = 0.04, SRMR = 0.03, NFI = 0.98, and CFI = 0.99. All standardized factor loadings were over 0.85 ($ps < 0.01$).

Table 10.2 presents the means, standard deviations, and Cronbach's alphas for the PNS-AL subscales, and correlations between scores on the PNS-AL subscales at Time 1 and BPNS-AL subscales at Time 2. The Cronbach's alphas of the PNS-AL subscales indicated satisfactory internal consistency reliability (0.91–0.95). The correlations between scores on the PNS-AL subscales at Time 1 and BPNS-AL subscales at Time 2 were all positive and significant ($ps < 0.01$). Among these correlations, the correlations between subscale scores pertaining to the same basic psychological need (e.g., scores on the perceived autonomy support subscale at Time 1 and the autonomy satisfaction subscale at Time 2) were significantly higher than those between the other subscale scores ($ps < 0.05$).

The Relationship Between Perceived Need Support and Further Need Satisfaction

Structural equation modeling was used to examine the hypothesized relationship between perceived need support and further need satisfaction. The structural model is presented in Fig. 10.1. The path between the two latent variables represents the influence of perceived need support on need satisfaction. The three subscales of the PNS-AL were used as indicators of perceived need support (latent variable). Indicators of the other latent variable, i.e., need satisfaction, used the BPNS-AL subscales. Additionally, the structural model includes the covariance between the errors associated with the observed variables pertaining to the same basic psychological needs (i.e., e1 and e4, e2 and e5, e3 and e6). The results indicate that the model fits the data

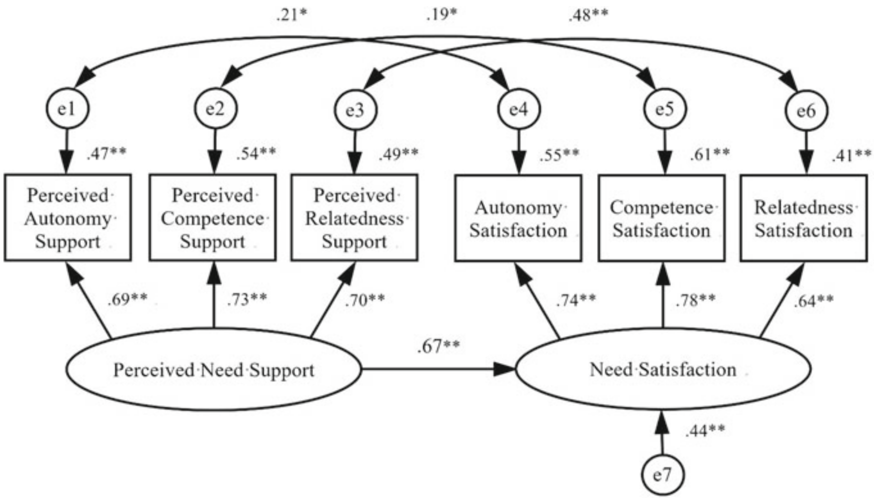

Fig. 10.1 Structural model of the relationship between perceived need support and further need satisfaction. $^*p < 0.05$, $^{**}p < 0.01$

well, $\chi^2 = 21.36$, $df = 5$, $p < 0.01$, $\chi^2/df = 4.27$, GFI = 0.98, AGFI = 0.91, RMSEA = 0.09, SRMR = 0.04, NFI = 0.97, and CFI = 0.98. Standardized estimates for the structural model are provided in Fig. 10.1. All the factor loadings and path coefficients were significant (ps < 0.01) and in the hypothesized direction. As expected, perceived need support had a positive and significant effect on need satisfaction after four weeks ($\beta = 0.67$, $p < 0.01$).

In the present structural model in which all the observed variables are indicators of the latent variables, the fit indices of the structural model are identical to those of the measurement model with covariance between the two latent variables. Furthermore, the values on the paths from the latent variables to the observed variables of the structural model correspond to factor loadings in the measurement model. Therefore, the measurement model in this study adequately fits the data. On the other hand, the model that did not include covariance between the errors did not fit the data.

Discussion

The Perceived Need Supports of Arabic Learners Scale

This study examined the influence of perceived need support on need satisfaction of Arabic language students in Japanese universities and accordingly developed a measure to assess their perceived need support. The results suggest that the PNS-AL is a usable measure composed of three 3-item subscales to assess perceived need support

among Arabic learners. Internal consistency reliability was satisfactory for each subscale. The factor structure was confirmed through exploratory and confirmatory factor analyses, as an indicator of construct validity. Moreover, the PNS-AL showed additional evidence of construct validity based on the correlations with the scores for need satisfaction after four weeks.

Influence of Perceived Need Support on Further Need Satisfaction

The present findings support the hypothesis that perceived need support positively influences need satisfaction after four weeks among Arabic language students. The results suggest that Arabic language students who perceived higher levels of need support may subsequently experience more need satisfaction. This theoretical and empirical relationship (Olafsen et al., 2015; Reeve, 2018; Ryan & Deci, 2017; Vansteenkiste et al., 2020) was supported among Arabic language students in Japanese universities.

Limitations of This Study and Directions for Future Research

Several limitations of this study and directions for future research should be noted. In Japan, the characteristics of not only Arabic language learners but also Arabic language teachers are not yet well understood (Sumi & Sumi, 2018). It is necessary to pursue research on their characteristics and explore the problems discussed in this study, including teachers' negative attitudes. The PNS-AL needs further study to examine additional psychometric properties, including test–retest reliability and predictive validity, and its generalizability to other populations, such as those learning Arabic for work. Although this study examined the model linking the two constructs (i.e., need support and need satisfaction), from the perspective of SDT, future studies of Arabic language learners need to examine models incorporating various psychosocial outcomes, such as motivation and well-being, because it is expected that need support is related to these various psychosocial outcomes through need satisfaction (Olafsen et al., 2015; Reeve, 2018; Ryan & Deci, 2017). Another limitation of this study is the use of a single time interval to examine the influence of need support on need satisfaction. Further study is necessary to confirm the results found here over various time intervals.

Implications for Arabic Teaching in Japanese Universities

In sum, implications for Arabic language teaching in Japanese universities are discussed. As suggested in this study, teachers' need support may improve the subsequent need satisfaction of Arabic language students, which may consequently nurture autonomous motivation and well-being (Olafsen et al., 2015; Reeve, 2018; Ryan & Deci, 2017). Therefore, Arabic language students have received substantial benefits from teachers' need support. The instructional behaviors of Arabic language teachers may work to some degree as need support and have contributed somewhat to the students' satisfaction with BPN.

As for the application of positive education in the university setting (Oades et al., 2011; White & Murray, 2015), teachers' instructional behaviors to foster students' autonomy, competence, and relationships do not seem to be positive educational practices because they may perform instructional behaviors for the primary purpose of better class outcomes, not students' well-being (Noble & McGrath, 2010; Seligman et al., 2009). Although their instructional behaviors would be somewhat suitable and necessary for positive education, they might not only provide insufficient need support, but also be less effective for the positive functioning of students.

Arabic language teachers in Japanese universities, probably like other Japanese university teachers, may have little knowledge of SDT and positive education. Additionally, Arabic language teachers may be less concerned about the advanced teaching and learning of Arabic and insufficient efforts to satisfy students' needs. These attitudes may keep Arabic language teachers from understanding the significance of BPN in students' well-being and teaching their classes without attending to positive education.

As for need support, Arabic language teachers must understand the significance of providing need support, acquiring appropriate need supportive behaviors, and practicing these behaviors while teaching the Arabic language. Arabic language teachers first need to improve their negative attitudes toward Arabic teaching and learning practices and students' needs for Arabic language learning. They will be required to learn the theory of positive education and SDT. To teach valid skills of well-being as well as the skills of achievement in the Arabic language, it may also be necessary for Arabic teachers to master various effective educational practices, especially positive educational practices (Noble & McGrath, 2010; Oades et al., 2011; Seligman et al., 2009). By doing so, their instructional behaviors will provide more successful support for not only the students' achievement but also their well-being.

Conclusion

The main findings of this study show that need supports perceived by Arabic language students positively influenced their need satisfaction. The support provided by Arabic teachers may exert some positive influence on students' well-being and mental health.

However, the positive influence may be limited because of the primary purpose of the Arabic teachers' supportive behaviors and Arabic teachers' negative attitudes toward teaching and learning practices and students' desire. Therefore, the supportive behaviors of Arabic teachers need to be improved based on appropriate educational practices, especially positive educational practices. The need for such an improvement might be equally valid for other teachers in Japanese universities. Although the improvement may not be easy in practice, the improvement should be pursued not only to enhance Japanese students' achievements but also to promote their well-being.

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Chapter 11
What Makes You Grittier? The Role of Effortful Control and Social Support in Predicting Grit Among Migrant Children in China

Chen Chen

Abstract Grit, as a personality strength, has been found to benefit students' academic attainment and wellbeing. To promote grit is helpful for Chinese migrant children to resist their difficulties in poorer academic performance and personality disadvantages. Based on the indirect view of socialization, this study examined how temperamental effortful control and mother and teacher support are related to migrant children's two facets of grit, consistency of interest (grit-CI) and perseverance of effort (grit-PE), including the mediating function of mother and teacher support. Six hundred and five migrant children ($M_{age} = 10.90$, $SD_{age} = 0.76$) from Mainland China participated in this three-wave prospective longitudinal study. Children's parents answered the measures of effortful control, while children responded to questionnaires about grit, mother support, and teacher support. Effortful control and social support (i.e., mother and teacher support) significantly and positively predicted grit-CI and grit-PE, with the predictive effect stronger on grit-PE than that on grit-CI. Temperamental effortful control predicted migrant children's grit-CI through mother support, and it predicted their grit-PE through teacher support. Aside from the indirect effects through social support, effortful control also kept the direct effects on grit. Temperamental effortful control and mother and teacher support independently and jointly enhanced migrant children's grit-CI and grit-PE in slightly different ways. Shifting from a deficit perspective to a character-strengths perspective, educators need to emphasize migrant children's protective factors such as temperamental effortful control, social support, and grit to enhance their positive development.

Keywords Grit · Effortful control · Temperament · Mother support · Teacher support · Chinese migrant children

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Practitioner Points

- Both grit-CI (i.e., consistency of interest) and grit-PE (i.e., perseverance of effort) have temperamental roots in effortful control. Teachers and parents can foster migrant children's grit by enhancing their ability to voluntarily control their attention and behavior.
- Mother support is associated with migrant children's grit-CI, while teacher support is associated with their grit-PE. Teachers and parents have different roles to play in migrant children's grit development.
- Effortful control predicts migrant children's grit-CI and grit-PE through mother support and teacher support, respectively. When fostering children's grit, parents and teachers should pay attention to both children's innate temperamental traits and their own supportive behaviors.

Migrant children in China refer to children under 18 years old who moved with their parents from rural to urban areas for over half a year without household registration in the receiving localities (NBS et al., 2017). Due to their "rural residency" derived from the household registration system (*hukou*), migrant children are prevented from enjoying equal opportunities and resources as their urban counterparts (Hu & West, 2015). Research has found that migrant children, in general, have poorer academic performance than their urban counterparts (Lu & Zhou, 2013; Ma et al., 2018; Wang et al., 2017). They also suffer from numerous other difficulties such as educational inequalities, social discrimination, and adjustment challenges (Hu & West, 2015; Liang et al., 2014; Zhou & Rong, 2011). However, much of the existing research on migrant children takes a deficit perspective highlighting their shortcomings. Little research has focused on their character strengths such as grit, a trait-like perseverance and passion for long-term goals (Duckworth & Quinn, 2009; Duckworth et al., 2007). This study attempts to address this research gap by adopting a strengths-based perspective (King & Trent, 2013).

Grit has been demonstrated to be a powerful facilitator for individuals' academic performance and subjective wellbeing (Bowman et al., 2015; Chen & Gong, 2021; Chen et al., 2018; Credé et al., 2017; Datu et al., 2016; Duckworth & Quinn, 2009; Jiang et al., 2019). The bulk of the research on grit has mainly focused on how grit predicts those key outcomes. It is only more recently that research has been directed to unpacking what factors facilitate or inhibit grit by investigating the personal and social-contextual sources from which grit is derived (e.g., Albert et al., 2019; Clark et al., 2020; Datu, 2017; Fite et al., 2017; Hill et al., 2016; Karlen et al., 2019; O'Neal et al., 2018; Raphiphatthana & Jose, 2020).

However, the potential role of temperament, as the core of personality that plays an important role in children's learning and social functioning (Chen et al., 2009; Swanson et al., 2014; Valiente et al., 2008; Zhou et al., 2010) has been ignored. Similarly, how mother and teacher support, as social-contextual nutrients necessary for individuals' growth and flourishing (Ryan & Deci, 2017), are related to grit, particularly alongside temperament remains unclear. Based on an indirect view of

socialization (Sanson et al., 2004), temperament may exert its impact on social development through a third variable such as mother and/or teacher support. The current study thus aimed to investigate how temperamental effortful control, mother support, and teacher support facilitate grit (i.e., consistency of interest and perseverance of effort) and whether mother and teacher support mediate the relation between effortful control and grit.

Chinese Migrant Children and Their Wellbeing Challenges

The massive internal migration started in the 1980s has caused millions of children to be unavoidably involved in the process. About 34.3 million of them migrated with their parents to cities and the other 68.8 million were left behind in their rural and urban hometowns (NBS et al., 2017). In 2019, the number of migrant children staying in compulsory education reached to approximately 14.27 million, with about 10.43 in elementary schools and 3.85 in junior high schools (MOE, 2020). However, the household registration system (*hukou*) in China determines one's eligibility to access social welfare benefits, which makes migrant children without a local *hukou* face restricted access to public education, healthcare, and other social welfare benefits in cities. More importantly, migrant children are generally in lower socioeconomic status and experience discrimination from urban people, including urban children, because of the dual cultural differences between the rural and urban areas.

Research has shown that perceived discrimination continuously threatens an individual's social position and belongingness (Richman & Leary, 2009), which cause the changes in the individual's personality, such as increases in neuroticism and declines in conscientiousness (Sutin et al., 2016). A cross-sectional study among Chinese migrant children also found the positive association between perceived discrimination and neuroticism, and when parental support was low, the perceived discrimination could harm those elementary school students' conscientiousness (Xiang et al., 2018). Consistently, certain previous studies have already identified disadvantages in migrant children's personality development, such as having more negative (i.e., neuroticism) but less positive (i.e., extraversion, openness, agreeableness, optimism, and mastery) personality traits than their urban counterparts (Wang & Zou, 2008). In this regard, it is valuable to find a way to helping migrant children strengthen their positive personality traits. To promote their grit seems to be such a way.

Grit in the Context of Positive Education

Grit, as a trait-like perseverance and passion for long-term goals, contains consistency of interest and perseverance of effort (Duckworth & Quinn, 2009; Duckworth et al., 2007). Although measured by two subscales, consistency of interest and perseverance of effort (grit-CI and grit-PE hereafter) are treated in two major ways in predicting

individuals' academic performance and wellbeing, with one way at the level of the overall grit score (e.g., Duckworth & Quinn, 2009; Duckworth et al., 2007; Lan & Moscardino, 2019) and the other way to seperating the grit-CI and grit-PE scores (e.g., Chen & Gong, 2021; Chen et al., 2018; Dixson et al., 2016). In their meta-analytic synthesis of the grit literature, Credé et al. (2017) argued that their results did not support grit as a higher-order construct characterized by two low-order facets; and compared with either grit-CI or overall grit, grit-PE seems a much better predictor of performance and deserves to be "treated as a construct that is largely distinct from consistency to maximize its utility" (p. 502).

Grit has been demonstrated to be a powerful facilitator for individuals' achievement- and non-achievement-relevant outcomes, even above and beyond intelligence and/or Big Five personality traits (Bowman et al., 2015; Chen & Gong, 2021; Credé et al., 2017; Datu et al., 2016; Duckworth & Quinn, 2009; Duckworth et al., 2007). Some recent studies have focused on grit's role as a protective factor enhancing or buffering the effect of environmental influence on student wellbeing or problem behavior (e.g., Lan & Moscardino, 2019; Lan & Radin, 2020). As personality strengths in recent positive psychology research (King & Trent, 2013; Sheldon et al., 2015), girt fostering and cultivation has attracted the attention of positive education (Seligman et al., 2009). Intervention studies have also proved that wellbeing, including resilience, sense of meaning, and character strength of grit, should be and can be taught in school (Seligman et al., 2009; van der Vaart et al., 2021). Considering their poorer academic performance and disadvantages in personality traits, the positive education in grit becomes more important for migrant children.

Then how? Conceptualized as a malleable trait, grit is influenced by both internal and external forces (Duckworth, 2016). Developmental psychologists in socialization research propose various models, from the early unidirectional view to the more recent indirect and interactional views, to explain the developmental processes through which temperament functions in social development (Sanson et al., 2004). Different from the unidirectional view that temperament has direct linear effects on social development, and vice versa (Schaffer, 1996), an indirect view claims that temperament may exert its impact on social development through a third variable, specificically mothers' and/or teachers' supportive bahviors. Previous studies have examined cerain personal factors such as cognitive and motivational (Albert et al., 2019; Fite et al., 2017; Karlen et al., 2019; O'Neal et al., 2018; Raphiphatthana & Jose, 2020; Tang et al., 2019; Von Culin et al., 2014) and social-contextual factors such as relatedness to teachers, parents, and friends (Datu, 2017) and social support from parents, teachers, and classmates (Clark et al., 2020). However, temperament, an individual difference variable that plays an important role in children's learning performance and social functioning (Swanson et al., 2014; Valiente et al., 2008; Zhou et al., 2010) has bene ignored. Moreover, little is known about how the aforementioned social support is related to grit alongside temperament. In this sense, this study examined how temperamental effortful control and social support (i.e., mother and teacher support), as internal and external factors, function in fostering migrant children's grit-CI and grit-PE.

Grit and Temperamental Effortful Control

Effortful control refers to "the efficiency of executive attention, including the ability to inhibit a dominant response, to activate a subdominant response, to plan, and to detect errors" (Rothbart & Bates, 2006, p. 129). It is a multidimensional construct to describe children's ability to detect errors, to plan for the future, and to choose a course of action under conditions of conflict (Rothbart & Sheese, 2007).

Effortful control (EC hereafter) has close relations with personality traits. Temperament and personality have been conventionally used to represent individual differences in different developmental stages. As a general term referring to the *how* of behavior, in other words, behavioral style (Chess & Thomas, 1996), temperament is the core of personality, generally representing the whole personality in infancy and a subset of personality in later childhood and adulthood (Shiner & Caspi, 2003). Personality is the result of the interaction between temperament and environment, especially an individual's experience, and characterizes people's tendencies to behave, think, and feel in certain consistent ways (Shiner & Caspi, 2003). A temperament and personality typology has been proposed to bridge the temperament and personality literatures in children, in which, negative affectivity has been linked to neuroticism, surgency to extraversion, and effortful control to conscientiousness (Ahadi et al., 1993; Roberts & DelVecchio, 2000). Connectedly, an overlap and a close relation between grit and conscientiousness has been provided (Duckworth & Quinn, 2009; Duckworth et al., 2007; Werner et al., 2019), suggesting a link between temperamental EC and grit.

So far, no published research has examined the association between temperamental EC and grit. But their association could be inferred from the relation between conscientiousness and girt. Conscientiousness is found positively correlated with grit-PE and grit-CI, and its correlation with grit-PE is stronger than that with grit-CI (Duckworth & Quinn, 2009; Duckworth et al., 2007; Werner et al., 2019). I therefore wonder will the pattern between conscientiousness and grit-CI and grit-PE be extended to that between EC and grit? This becomes the first research question of the current study and this exploration will enrich the understanding of constitutionally based sources of grit at the theoretical level, and identify a way to enhancing migrant children's two closely correlated by still different facets of grit at the practical level.

Grit and Mother and Teacher Support

The constructs of mother and teacher support in the current study are derived from self-determination theory (SDT; Ryan & Deci, 2017), in which, social conditions are theoretically assumed and empirically evidenced to influence an individual's growth and wellbeing (Ryan & Deci, 2017). Both mother and teacher support consist of three dimensions of autonomy support, structure and involvement. Autonomy support captures how the mother/teacher provides children with affordance of independent

choice, initiative thinking and inquiry (Deci & Ryan, 2008). Structure includes the mother/teacher's provisions of unambiguous expectations, adequate assistance, and congruent behaviors (Belmont et al., 1988; Grolnick & Kurowski, 1999). Involvement describes the way that the mother/teacher pays attention to, cares for, and interacts actively with children, with which, children develop an intimate relationship with the mother/teacher (Belmont et al., 1988; Grolnick & Kurowski, 1999).

Previous studies have examined the antecedents of grit from the social support perspective. For example, adolescents' grit development could be facilitated through social support from parents, teachers, and classmates (Clark et al., 2020), and paying attention to their relatedness to teachers, parents, and friends (Datu, 2017). Interestingly, the function of parent support and teacher support in adolescents' grit seems different. A study in a high school sample found a positive relation of grit and its facets to social support from parents and classmates, but not from teachers. However, only teacher support moderated the positive relation between grit and achievement (Clark et al., 2020). Nevertheless, no known research has investigated students from non-Western contexts, young children, or even migrant children on how mother and/or teacher support is related to their grit (Xiang et al., 2018 as an exception in *Chinese Migrant Children and their wellbeing challenges*).

Therefore, may the association between contextual factors and grit found among adolescents in the Western society be observed among younger children in other settings? May parents and teachers play different roles in encouraging or discouraging grit among Chinese migrant children? These consist of the second research question of the current study, as Datu (2017) pointed out "… limited research has been done to examine social and contextual antecedents of grit especially in non-Western settings (p. 135)". This research will help with understanding whether and how the two facets of grit are linked to their social-support correlates in youth populations (Clark et al., 2020).

The Mediation of Mother and Teacher Support

How does EC and mother and teacher support work jointly exert their influence on migrant children's grit? Based on the indirect view on social development (see *Grit in the Context of Positive Education*), temperamental EC may exert its impact on grit-CI and grit-PE through a third variable, that is, mother and/or teacher supportive bahviors. Consistently, the temperament perspective also aruges that "children with high effortful control are expected to be more successful at developing and maintaining positive social relationships", which, in turn, facilitates their learning and academic success (Valiente et al., 2008, p. 181; Zhou et al., 2010). This EC → social support → achievement path may be extended to children's grit. In other words, EC might promote trait-like grit through parent–child and/or teacher-student relationships, which consists of the third research question of the current study.

No study yet has examined the mediation of mother and teacher support in the association between EC and grit. But the EC → social support → grit path may be inferred

from the empirical research on the EC → social support → achievement path. A study conducted among 264 7- to 12-year-old children found that teacher–child relationships and classroom participation partially mediated the relation between EC and the change in GPA and school absences within and across the school year (Valiente et al., 2008). Another study also found that child inhibition tended to evoke parental overcontrol and overprotectiveness, which, in turn, reinforced child social wariness and peer withdrawal (Rubin & Stewart, 1996; Rubin et al., 1997). These studies indicate that children's different temperament may provoke different resposes from parents and/or teachers, which, in turn, lead to children' social-emotional behaviors. Of course, to admit the contribution of temperament to mother and teacher support does not deny the inverse relationship, which occurs very early in the child's life. But in the current study, I focused on the direction from temperamental EC to mother and teacher support and grit in a prospective longitudinal study.

The Present Study

This prospective longitudinal study has three objectives. First, it intended to explore how temperamental EC is related to migrant children's grit-CI and grit-PE (Q1). Second, this study also intended to explore how mother support and teacher support are related to migrant children's grit-CI and grit-PE (Q2). Third, this study aimed to examine the mediating function of mother and teacher support in the association between EC and the two facets of grit (Q3). Based on the indirect view of socialization, the temperament perspective, and the extant literature, this study hypothesized that, (a) EC will have positive influence on cultivating migrant children's grit-CI and grit-PE (H1); (b) both mother support and teacher support will have stronger influence on migrant children's grit-PE than on grit-CI (H2a and H2b, respectively). (c) EC will influence migrant children's grit-CI and grit-PE through mother support and teacher support that act as mediators in parallel (H3) (Fig. 11.1).

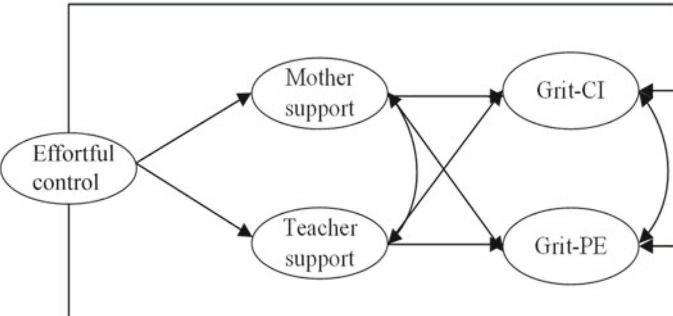

Fig. 11.1 The conceptual model: predicting grit from effortful control: the mediation of mother support and teacher support

Method

Participants

Six hundred and five migrant children ($M_{age} = 10.90$, $SD_{age} = 0.76$) in Grade 4 from seven elementary schools in Eastern China were recruited for this three-wave longitudinal study in the spring semester. Among them, 167 (27.6%) were from four schools in Nanjing and 438 (72.4%) were from three schools in Shanghai; 358 (59.2%) were boys and 243 (40.2%) were girls, with 4 (0.7%) children ignoring gender information. The age of 96.7% students ranged from 9 to 12 years and 3% students were at their 13 years, with two students at their 14 (0.2%) and 15 (0.2%) years and two (0.35%) not reporting the age. The floating time (i.e., the time since migrant children moved from their hometown to the receiving city) ranged from 0.5 to 13.0 ($M = 7.54$, $SD = 3.11$) years, with 49 students missing the information. There were 25.4% migrant children lived in the city less than five years, 48.3% lived for five and half to 10 years, and 26.3% resided in the city for more than 10 but less than 13 years.

Research Procedure

Data collections were conducted under the permission of school principals and class teachers. Written consent was obtained from all participants and their parents. The timeline of the three-wave data collection was presented in Fig. 11.2. W1 had 573 children[1] and W2 had 537 children, among whom, 510 remained and 27 were newly added, with the retention rate = 89.0%. The 510 remaining students did not differ significantly from the 63 dropouts ($ps \geq 0.244$) and 27 newly added students ($ps \geq 0.242$) in any of the demographic and investigated variables. In W3, 475 children remained from W1 and W2, seven children in W1 missed W2 but attended W3. The remaining students did not differ significantly from the 91 dropouts[2] ($ps \geq 0.517$) and 28 newly added students ($ps \geq 0.160$) in the demographic and investigated variables.

Measures

All questionnaires adopted were translated into Chinese following a standard back translation procedure, except for the validated Short Grit Scale among Chinese

[1] I reported the participant number from the parents' perspective, given that 573 parents reported their children's temperament information, although 605 children in total attended the three-wave survey.

[2] The 482 remaining students in W3 had longer floating time ($t_{(523)} = 2.228$, $p = 0.026$) than dropouts.

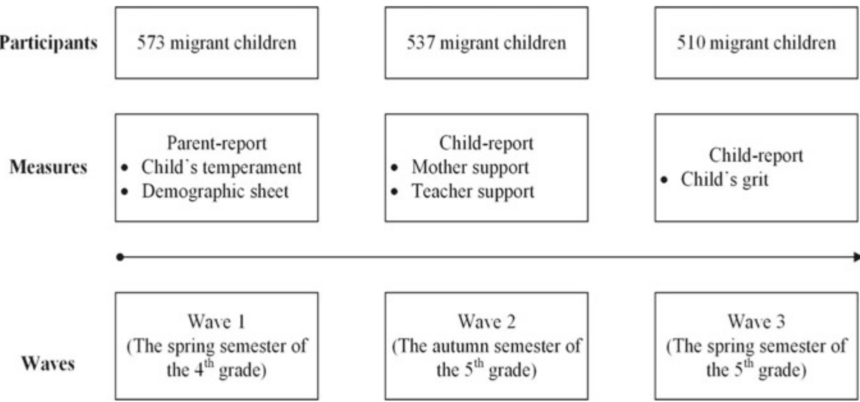

Fig. 11.2 Timeline for the three-wave data collection

students (Chen et al., 2018). The questionnaires were rated on 5-point Likert scale, ranging from 1 (*not at all true of me*) to 5 (*very true of me*). The CFA results are presented in Table 11.1. The questionnaires details, including the dimensions and sample items are put in the Appendix.

Grit. The Short Grit Scale (Grit-S; Duckworth & Quinn, 2009) was adopted to measure migrant children's consistency of interest (i.e., grit-CI) and perseverance of effort (i.e., grit-PE). The Chinese version of the Grit-S has satisfactory reliability and construct validity among Chinese students and measurement invariance across Chinese and American samples (Chen et al., 2018). In the present study, the composite reliabilities of grit-CI and grit-PE were 0.730 and 0.669, respectively.

Table 11.1 The results of confirmatory factor analyses

Model	χ^2	*df*	*p*	RMSEA [90% CI]	CFI	SRMR	Factor loadings	
Grit	57.363	19	<0.001	0.063 [0.045, 0.082]	0.942	0.047	0.398–0.764***	/
Effortful control	104.673	41	<0.001	0.052 [0.040, 0.065]	0.889	0.050	0.241–0.643***	0.801–0.977***
Teacher support	120.732	51	<0.001	0.050 [0.039, 0.062]	0.955	0.038	0.437–0.755***	0.889–0.914***
Mother support	334.187	132	<0.001	0.053 [0.046, 0.061]	0.923	0.060	0.222–0.799**	0.764–0.981***

Note ** $p < 0.01$, *** $p < 0.001$. Except for grit, the second-order CFA models were examined for effortful control, mother teacher, and teacher support

Effortful control. The parent-report effortful control subscale in Early Adolescent Temperament Questionnaire-Revised (EATQ-R; Capaldi & Rothbart, 1992; Ellis & Rothbart, 2001) was used to measure EC, including attention, activation control, and inhibitory control. The psychometric properties have been demonstrated (Baetens et al., 2011; Ellis & Rothbart, 2001; Kim et al., 2003; Sijtsema et al., 2010), which is consistent with the child-report version (Baetens et al., 2011; Ellis & Rothbart, 2001; Muris & Meesters, 2009). The final second-order effortful control model had acceptable fit to the data and its composite reliability was 0.606.

Teacher support. The Teacher as Social Context Questionnaire (TASC; Belmont et al., 1988) was used to measure migrant children's perceptions of teacher support for their needs for autonomy, competence, and relatedness. Three 8-item subscales, with 12 reversely scoring items measured autonomy support, structure, and involvement, respectively. The final second-order TASC model contained 12 non-reversely scoring items, considering the negative item bias for proadolescent children (Marsh, 1986) and a significant improvement in model fit (Haerens et al., 2013; Lietaert et al., 2015). The current composite reliability of teacher support was 0.745.

Mother support. Mother support of responsiveness, behavior monitoring, and autonomy support was assessed by three separate measures (see details in Appendix). These measures correspond to mothers' need-supportive behaviors fulfilling needs for competence, relatedness, and autonomy in SDT, respectively. All the measures have acceptable reliability and validity in existing literature (Shih, 2013; Soenens et al., 2006). The final questionnaire contained 18 of the original 22 items, based on the cross-validation procedure on two randomly selected subsamples. The second-order mother support model had satisfactory model fit and composite reliability (0.781).

Data Analyses

Structural equation modeling (SEM) with latent variables (Wang & Wang, 2020) was carried out using M*plus* 8.2 (Muthén & Muthén, 1998–2017) to test the contribution of EC, mother support, and teacher support to grit-CI and grit-PE. Bootstrapping method with 95% CIs not containing zero value were adopted to examine the multiple-mediator model of mother and teacher support, and to further evaluate the significance of the indirect effects. Given the missing values resulting from the longitudinal research design, multiple imputation (Roubin, 1987) was adopted for preliminary analysis and full information maximum likelihood (FIML) estimation (Schafer & Graham, 2002) was carried out for SEM by taking all information into account. Thus, although 475 children completed the survey in all three waves, in the SEM, all the 605 children were included.

Multiple indices were adopted to evaluate model fit, including root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR) and comparative fit index (CFI) in that χ^2 test tends to be oversensitive to sample size (Byrne, 2012; Iacobucci, 2010). The CFI value above 0.90 represents an acceptable

model fit (Hu & Bentler, 1999); a cutoff of 0.08 (close to 0.08 or lower) indicates a good model fit for both RMSEA (McDonald & Ho, 2002) and SRMR (Hu & Bentler, 1999; Iacobucci, 2010).

Results

Preliminary Analyses

Means, standard deviations, composite reliabilities for EC, teacher support, mother support, and grit are presented in Table 11.2. EC, teacher support, and mother support were positively correlated with grit-CI (ranging from 0.122 to 0.177, ps < 0.05) and grit-PE (ranging from 0.208 to 0.294, ps < 0.001), with the correlations stronger for grit-PE as expected. Grit-CI was positively correlated with grit-PE ($r = 0.346$, $p <$ 0.001). The three predictors of EC, teacher support, and mother support were also positively correlated with one another. Regarding the differences of gender, age, and floating time in the key variables, gender differences were found both in EC ($t_{(4963.353)}$ $= -3.143$, $p = 0.002$) and grit (grit-CI: $t_{(2969)} = -2.403$, $p = 0.016$; grit-PE: $t_{(772)}$ $= -2.374$, $p = 0.018$), with female students reporting higher levels than their male counterparts. Age was only negatively correlated with grit-CI ($r = -0.085$, $p =$ 0.049), indicating the decreasing in older migrant children's consistency of interest when they entered higher grades. Given the importance of floating time for migrant children, gender, age, and floating time were all controlled for in subsequent data analyses.

Predicting Grit from EC

The model using EC to predict grit-CI and grit-PE fit the data well (see Table 11.3). Consistent with H1, EC significantly and positively predicted grit-CI ($R^2 = 0.095$, $p = 0.016$) and grit-PE ($R^2 = 0.117$, $p = 0.003$) and more variance in grit-PE was explained (see Table 11.3).

Predicting Grit from Social Support

The model using mother and teacher support to predict grit-CI and grit-PE also fit the data well (Table 11.3). Grit-CI ($R^2 = 0.107$, $p = 0.003$) and grit-PE (R^2 $= 0.200$, $p < 0.001$) were significantly explained. When working jointly, mother support only contributing grit-CI, whereas teacher support only contributing grit-PE. However, when predicting grit-CI and grit-PE independently, mother support

Table 11.2 Intercorrelations among grit, effortful control, mother support, and teacher support ($n = 605$)

Variables	1	2	3	4	5	6	7
1 Effortful control	–						
2 Teacher support	0.105*	–					
3 Mother support	0.114*	0.762***	–				
4 Consistency of interest	0.177***	0.122*	0.165***	–			
5 Perseverance of effort	0.208***	0.294***	0.280***	0.346***	–		
6 Age	−0.036	0.041	0.009	−0.085*	−0.042	–	
7 Floating time	0.056	0.028	0.043	−0.006	0.025	−0.173***	–
M	3.284	3.462	3.570	3.653	3.687	10.9	7.536
SD	0.592	0.872	0.730	0.966	0.834	0.763	3.109
Composite reliability	0.606	0.745	0.781	0.730	0.669	/	/

Note * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; missing values were substituted by multiple imputation (imputations = 20, iterations = 200)

and teacher support became significant contributors, with their prediction stronger than for grit-PE (Table 11.3). The results are consistent with H2a and H2b. The reason is discussed later.

The Mediating Function of Teacher and Mother Support

The multiple-mediator modeling was examined and the model fit indices were acceptable (Table 11.3). The results showed that (a) EC positively predicted mother support ($\beta = 0.179$, $p = 0.004$, 95% CI = [0.054, 0.289]) and teacher support ($\beta = 0.177$, $p = 0.004$, 95% CI = [0.046, 0.297]); (b) mother support positively predicted grit-CI ($\beta = 0.222$, $p = 0.008$, 95% CI = [0.063, 0.393]), while teacher support positively predicted grit-PE ($\beta = 0.335$, $p < 0.001$, 95% CI = [0.197, 0.466]). (c) With mother and teacher support included as mediators, EC still directly and positively predicted grit-CI ($\beta = 0.208$, $p = 0.004$, 95% CI = [0.059, 0.344]) and grit-PE ($\beta = 0.246$, $p < 0.001$, 95% CI = [0.095, 0.366]) (Fig. 11.3).

With regard to the specific indirect effects, EC influenced grit-CI partial through mother support (estimate = 0.040, SE = 0.018, $p = 0.029$), but influenced grit-PE partial through teacher (estimate = 0.059, SE = 0.025, $p = 0.017$). None of the 95% CIs of the significant direct and meditating paths contained zero value, supporting hypothesis H3 (see Table 11.4). Only age significantly predicted grit-CI ($\beta = -0.105$, $p = 0.043$).

Table 11.3 Model fit indices and results of predicting grit from effortful control, mother support, and teacher support

Model	AIC	BIC	aBIC	χ^2	*df*	*p*	RMSEA [90% CI]	CFI	SRMR
Controlling for gender, age, and floating time									
Prediction model 1 (only EC)	36,296.436	36,653.260	36,396.105	350.732	194	<0.001	0.037 [0.030, 0.043]	0.897	0.047
Prediction model 2 (TSU + MSU)	66,181.136	66,828.704	66,362.015	1202.972	755	<0.001	0.031 [0.028, 0.035]	0.923	0.047
Prediction model 2-1 (only TSU)	37,053.858	37,423.897	37,157.218	383.462	215	<0.001	0.036 [0.030, 0.042]	0.936	0.043
Prediction model 2-2 (only MSU)	46,506.879	46,956.212	46,632.387	627.004	362	<0.001	0.035 [0.030, 0.039]	0.930	0.050
Mediation model 3	85,210.325	86,047.319	85,444.116	2054.850	1240	<0.001	0.033 [0.030, 0.035]	0.896	0.047

Predictors	Grit-CI					Grit-PE				
	R^2	*p*	β	*p*	95% CI	R^2	*p*	β	*p*	95% CI
Controlling for gender, age, and floating time										
Independent prediction										
Effortful control	0.095	0.016	**0.256**	<0.001	[0.116, 0.395]	0.117	0.003	**0.319**	<0.001	[0.200, 0.438]
Mother support	0.103	0.004	**0.269**	<0.001	[0.157, 0.380]	0.108	0.002	**0.296**	<0.001	[0.192, 0.399]
Teacher support	0.063	0.021	**0.177**	0.004	[0.050, 0.339]	0.188	<0.001	**0.409**	<0.001	[0.193, 0.510]
Simultaneous prediction of grit from social support ($R^2_{\text{Grit-CI}} = 0.107, p = 0.003$; $R^2_{\text{Grit-PE}} = 0.200, p < 0.001$)										
Mother support	/	/	**0.248**	0.001	[0.099, 0.397]	/	/	0.099	0.159	[−0.039, 0.236]
Teacher support	/	/	0.045	0.563	[−0.107, 0.197]	/	/	**0.360**	<0.001	[0.223, 0.497]

Note EC = effortful control, TSU = teacher support, MSU = mother support, Grit-CI = consistency of interest, and Grit-PE = perseverance of effort

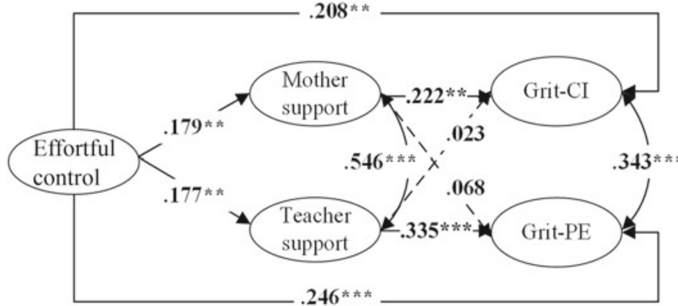

Fig. 11.3 The path diagram: the mediation of mother support and teacher support. *Note* ** $p < 0.01$, *** $p < 0.001$

Table 11.4 Multiple-mediator model testing: mother support and teacher support in the prediction of grit from effortful control

Paths	Estimate	*SE*	*p*	95% CI
Controlling for gender, age, and floating time				
Path 1: EC → mother support → Grit-CI	0.040	0.018	0.029	[0.013, 0.092]
Path 2: EC → teacher support → Grit-PE	0.059	0.025	0.017	[0.020, 0.120]
Path 3: EC → Grit-CI	0.208	0.073	0.004	[0.059, 0.344]
Path 4: EC → Grit-PE	0.246	0.068	< 0.001	[0.095, 0.366]

Note EC = effortful control, Grit-CI = consistency of interest, Grit-PE = perseverance of effort

Discussion

This study aimed to explore how temperamental EC and mother and teacher support promote grit-CI and grit-PE among Chinese migrant children. Via a three-wave one-year longitudinal study, the results fully support hypotheses H1, with the function of EC in grit-CI and grit-PE; H2a and H2b, with the function of mother support and teacher support in grit-CI and grit-PE. More importantly, this study provides support for H3 and the indirect view of socialization that temperamental EC not only influences grit-CI and grit-PE directly, but also indirectly through mother support and teacher support, respectively.

The Role of EC in Predicting Grit

This is the first study directly examining the association between EC and grit. The EC → grit-CI and EC → grit-PE paths indicate that EC is a constitutionally based source of grit and grit has its temperamental roots. This EC-grit link highlights the importance of temperament in the developmental process of migrant children's

personality traits. Migrant children high in EC tend to voluntarily control their attention and behavior as needed in pursuing long-term goals. The abilities to easily start a task, focus on it, maintain attention for longer periods of time, and to control relevant behavior voluntarily are more likely to help them develop long-term interest and put continuous efforts toward the task, even in the face of setbacks and adversities.

Interestingly, the current result is consistent with a study examining the association between grit and the brain (Wang et al., 2018). The authors found that the regional gray matter volume (rGMV) in the left dorsolateral prefrontal cortex (DLPFC) negatively, whereas the rGMV in the right putamen positively predicted grit. Together, these findings shed light on the role that internal factors, such as temperament and biological brain structure, play in promoting migrant children's grit. As aforementioned, EC is linked to conscientiousness in a temperament and personality typology (Shiner & Caspi, 2003). The currently identified new link between EC and grit further enhances the linkage between temperament and personality in children (Ahadi et al., 1993; Roberts & DelVecchio, 2000). Moreover, in line with the association pattern between conscientiousness and grit that compared with grit-CI, conscientiousness is more positively and closely related to grit-PE (Duckworth & Quinn, 2009; Schmidt et al., 2018; Werner et al., 2019), the current research result extends the pattern to the assocaition of EC and grit. Most importantly, the fact that grit has its constitutionally based temperament source encourages parents, teachers, and even children themselves to pay large attention to the individual differences in grit, respecting its function in shaping children's learning outcomes and wellbeing.

The Role of Mother and Teacher Support in Predicting Grit

Mother support and teacher support were found to positively predict grit-CI and grit-PE in slightly different ways. However, independently, the two types of support positively predicted both grit-CI and grit-PE, with the effect on grit-PE stronger than that on grit-CI. The findings do provide additional information for SDT that social conditions directly influence an individual's growth in grit (Ryan & Deci, 2017). The findings are also consistent with and extend existing literature on the social-support antecedents of grit to young children (Clark et al., 2020), particularly those in a non-Western context (Datu, 2017). In addition, the relatively stronger effect of mother and teacher support on Grit-PE provides support for the argument that as a much better predictor of performance, grit-PE deserves to be treated distinctly from grit-CI to maximize its utility (Credé et al., 2017).

The reason why mother and teacher support had different effects on grit-CI and grit-PE when working simultaneously in part derives from the correlation of grit-CI and grit-PE to mother and teacher support. In Table 11.2, teacher and mother support were highly correlated (0.762). Meanwhile, compared with teacher support, mother support was more positively correlated with grit-CI; compared with mother support, teacher support was more positively correlated with grit-PE. Thus, teacher support

remained as the significant predictor of grit-PE and mother support as the significant predictor of grit-CI.

Besides the explanation at the statistical level, it might be the case that for migrant children, mother support is more likely to serve as a sensitive and responsive climate at home. Although not having enough time engaging in children's learning activities, mother support may mainly facilitate children's consistent learning interest in the things they are doing even if they face adversities (i.e., grit-CI). At school, teachers intensively interact with migrant children in classroom, at playground, and in other out-of-class occasions. Teachers tend to provide more concrete guidance in migrant children's learning activities. When teachers provide autonomy support for their choices, set clear rules to their learning performance, and enhance their competence by providing opportunities, migrant children tend to overcome difficulties, continuously invest efforts, and eventually achieve their long-term goals (i.e., grit-PE). Actually, previous research has documented the different function that parents and teachers have in adolescents' grit (see Clark et al., 2020). In this regard, the current research results might be reasonably generalized to other non-migrant children. Of course, further research for this verification is necessary and encouraged. One thing needs to noted. The current study only examined the role of mother support in grit. Although mother and father prefer to educate children in a consistent way, they may play a different role in children's social development, and sometimes, mother and father could even adopt inconsistent parenting behaviors. In the future, the association between grit and parental support, by taking mother and father into account is encouraged.

The Mediating Function of Mother and Teacher Support

Consistent with H3, mother and teacher support acted as two significant mediators in parallel in the EC-grit link. EC facilitated grit-CI through provoking mother support and facilitated grit-PE through activating teacher support; meanwhile, EC continuously and positively contributed grit-CI and grit-PE. These results provide support for the indirect view in socialization (Sanson et al., 2004) that children's positvie mood and self-regulation (e.g., effortful control), compared with negative temperamental attributes such as negative reactivity, irritability, and difficulties, are more likely to provoke parenal responsiveness and social interaction. This principle might appropriately be extended to the teacher-student relationship that migrant children's positvie mood and effortful control are more likely to provoke teacher's responsiveness and social interaction. The above research results are also in accord with and extend the temperament → social support → achievement/wellbeing path (Rubin & Stewart, 1996; Rubin et al., 1997; Valiente et al., 2008) to the temperament → social support → grit path. Children's different temperament may provoke different resposes from parents and/or teachers, which, in turn, lead to their social-emotional behaviors. This reminds us the importance of the goodness-of-fit model that temperament theorists

have been advocated, namely, parents and/or teachers need to create appropriate social environemnt to fit children's individual differences.

Contributions, Limitations, and Implications for Migrant Children's Positive Education

This is the first study on the relations of grit to temperamental effortful control and mother and teacher support among Chinese migrant children. It supports the temperament-grit link by highlighting grit's temperamental root EC and the conscientiousness and EC typology in child development. It also supports SDT's statement that social conditions are nutrients of individuals' growth such as the trait-like girt (Ryan & Deci, 2017); meanwhile, it indicates that social conditions at home and in school might have different functions depending on the nature of the developmental outcomes such as girt-CI and girt-PE. Besides, this study provides empirical evidence for the indirect view of socialization (Sanson et al., 2004) that EC could facilitate migrant children's grit directly and/or indirectly through social relationships. The newly established temperament-grit link and the temperament → social support → grit path among young migrant children in the Chinese context enrich the understanding of the nature of grit, particularly its internal and external sources (Duckworth, 2016; Duckworth et al., 2007).

This study inevitably has its limitations. First, the generalization of the results should be cautious, given the specialty of Chinese migrant children. Further research is needed to replicate the findings with diverse samples. Second, the potential subjectivity in data cannot be ruled out. Migrant children self-rated themselves in most of the questionnaires except for EC, which was rated by parents. In future, multiple informative data collection is suggested to get a more accurate evaluation of the investigated variables. Third, although this study benefited from a prospective longitudinal study, more strict longitudinal study that repeatedly measures all the variable of interest and even experimental and/or intervention studies are needed for a more accurate causal relation. In addition, it would be more helpful to compare migrant children with their urban counterparts to identify the similarity and difference in the relations investigated and find the unique mechanism for migrant children.

Despite the limitations, the current research has its merits for migrant children's positive education. As aforementioned, numerous studies on Chinese migrant children have focused on the deficits perspective. With the rising of positive psychology and positive education (Seligman et al., 2005, 2009), the current research focus has been gradually shifting to their character strengths. Recent research findings have shown that migrant children have their bright sides, such as lower scores on learning problems (Zhao et al., 2021), higher scores on peer-assessed social competence and teacher-rated social competence and academic achievement (Chen et al., 2019), as well as distinguishable "keeping pace" and "jumpstarting" trajectories of mathematics and literacy development respectively (Wang et al., 2021), compared

with their nonmigrant counterparts. Therefore, the current study shed light on the ways to promoting migrant children's positive personality trait of grit. On one hand, parents, teachers, and school administrators should give support to migrant children by providing affordance of unambiguous expectations, adequate assistance, and independent choice, caring for them, and interacting actively with them. On the other hand, they should bear in mind that unless they pay attention to their effortful control by enhancing their ability to voluntarily control their attention and behavior as needed could their support benefit migrant children's grit development. The investment to those protective factors would help migrant children to fight against the risk factors due to the institutionally inequality and social discrimination. Taking one step further, combined with previous findings on the role that parents and teachers play in adolescents' grit (see Clark et al., 2020), the current call for the investment to those protective factors might also benefit other child groups including urban children and left-behind children in China.

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Ethical Compliance Statement

Compliance with Ethical Standards All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. Informed consent was obtained from the school principals and all children's parents.

Conflicts of Interest The author declares that she has no conflict of interest. This manuscript has not been published previously and it is not under consideration for publication elsewhere.

Appendix

The details of all the questionnaires adopted in the current study.

Variables	Measures	Dimensions	Sample items
Grit	The Short Grit Scale (Grit-S; Duckworth & Quinn, 2009)	Consistency of interest (4 items)	I often set a goal but later choose to pursue a different one
		Perseverance of effort (4 items)	I am a hard worker
Effortful control	Early Adolescent Temperament Questionnaire-Revised (EATQ-R; Capaldi & Rothbart, 1992; Ellis & Rothbart, 2001)	Attention (6 items)	Finds it easy to really concentrate
		Activation control (7 items)	Usually gets started right away on difficult assignments
		Inhibitory control (5 items)	Is usually able to stick with his/her plans and goals
Teacher support	Teacher as Social Context Questionnaire (TASC; Belmont et al., 1988)	Autonomy support (8 items)	My teacher gives me a lot of choices about how I do my schoolwork
		Structure (8 items)	My teacher shows me how to solve problems for myself
		Involvement (8 items)	My teacher likes me
Mother support	Autonomy support subscale in the Perceptions of Parents Scale (POPS; Grolnick et al., 1991)	Autonomy support (7 items)	My mother allows me to decide things for myself
	Parental Monitoring of Behavior in the Parental Regulation Scale-Youth Self Report (PRS-YSR; Barber, 2002)	Parental monitoring (i.e., competence support, 8 items)	My mother checks on me in reasonable ways to see if I am behaving like she wants me to
	Responsiveness subscale in the Children's Report on Parent Behavior Inventory (CRPBI; Schaefer, 1965; Schwarz et al., 1985)	Responsiveness (i.e., relatedness support, 7 items)	My mother gives me a lot of care and attention

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Part III
Fostering Well-Being in Schools

Chapter 12
Towards a School Culture Where Students Thrive: The Positive Education Journey of Westwood Primary School

Imelda S. Caleon and Veronica Chua-Yap Chen Hian

Abstract Positive education is gaining traction in Singapore Schools. One of the few schools in Singapore, and among the pioneers in Asia, that adopted the principles of positive education in crafting a well-being curriculum is Westwood Primary School (WWPS). WWPS adopted a whole-school approach to positive education that was framed within the larger framework of the Singapore national curriculum. This case study describes the school's journey in positive education, including its conceptualization and enactment of a well-being curriculum framework—THRIVE. Voices from the leaders, teachers and students of the school are presented to understand how the THRIVE framework is developed, applied and appreciated by key stakeholders. The challenges and enablers of adopting positive education in an Asian education setting are also described.

Practitioner Points

- Good starting points in implementing a positive education curriculum include having a schoolwide strategic conversation and envisioning journey to define a new school culture and framework that can facilitate attainment of goals aligned with the principles of positive education.
- A whole-school approach for the implementation of positive education to facilitate sustained positive change can be done by creating structures and opportunities for teachers and students to explicitly link intentional and incidental learning to the schools' positive education framework.
- An on-going professional development with reflections by staff followed by adaptive customization, active partnerships with stakeholders, and an empowering leadership are key enablers to enact a whole-school approach to positive education.

Positive education applies the key tenets and approaches of positive psychology in educating students. Positive psychology is an area within psychology that focuses

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on understanding and promoting the positive aspects of human functioning (Gable & Haidt, 2005), such as positive emotions and experiences, and human strengths and potentials. Taking advantage of current advancements in positive psychology, positive education operates towards the main goal of teaching the skills for academic learning and well-being (Seligman et al., 2009). Just like problem solving or reasoning skills, advocates of positive education assert that the skills of well-being (e.g., maintaining positive emotions and down-regulating negative emotions, forming positive connections) can be taught and nurtured. In consonance with the tight coupling of cognition and emotions that many scholars assert (Storbeck & Clore, 2007), a key principle that undergirds research and programmes on positive education is that "increases in well-being are likely to produce increases in learning, the traditional goal of education" (Seligman et al., 2009, p. 294). Several studies have also demonstrated that teaching the skills of well-being can make a difference in the life and functioning of students, as well as teachers (Seligman et al., 2005). A focus on promoting well-being in schools is also crucial given the current concerns on the increasing number of young people who have been reported to experience mental health problems, such as depression and anxiety (Hankin, et al., 2015). In Singapore, an increase in the number of stressed-out children and adolescents has also been reported recently (Teo, 2017). All these points converge towards the importance of cultivating well-being, alongside the teaching of academic skills—the goal of positive education—in schools where the youth spend a large proportion of their daily lives. While these goals are relatively straightforward, how they are achieved through the implementation of positive education is far from simple; and there has been limited understanding on empirically based operational frameworks to guide its application (Norrish et al., 2013).

Schools implementing programmes and curricula that are grounded on positive education were found to reap encouraging rewards (Goldberg et al., 2022; Shoshani & Steinmetz, 2014; Williams, 2011). These schools usually follow a whole-school approach, which calls for students, staff, educators, and administrators to be actively engaged in working towards a common goal and requires active and participatory planning (based on Hargreaves, 2008). For example, in Australia's Geelong Grammar School, which is a pioneer school in terms of adopting a whole-school approach to positive education, the use of strengths-based language was observed among students, and school faculty and staff; and improvements in students' conflict resolution and individual flourishing have also been detected (Williams, 2011). In Israel, the results of an experimental study conducted in Maytiv School, which compared the effects of the implementation of a one-year positive psychology intervention throughout the school with the no-intervention control condition, indicate the benefits of the intervention in terms of decreasing students' anxiety level, depressive symptoms, and general distress; and increasing students' self-esteem and self-efficacy (Shoshani & Steinmetz, 2014). The effects of a whole-school approach for implementing positive education in Dutch schools yielded promising results in relation to promoting academic engagement (Goldberg et al., 2022). While several schools from the Western and Middle Eastern regions have been featured in the positive education literature, schools in the Asian regions received scant attention.

Two studies framed in Asian education settings were surfaced from our scan of the positive education literature. Au and Kennedy (2018) reported some evidence of the effectiveness of a positive education programme in promoting well-being and flourishing of students in a Hong Kong secondary school. Nearly 60% of the students gave satisfactory ratings for the programme. These results were based on a survey and interviews conducted with the students at the end of the one-year implementation of the programme. One notable finding of the study is that students learned about positive values and attitudes through formal teaching and modelling after teachers. The study has two key limitations: the evaluation was done only after a year of programme implementation and baseline measures of outcomes were not collected.

A similar study was conducted at a secondary school in China (Zhang, 2016). The study involved interviews with school leaders and teachers, classroom observations and document analysis. The study aimed to identify the leadership practices that the school used to improve the students' wellbeing and the effectiveness of such practices in the three-year implementation of a positive education programme. The results of the study revealed the school's strategic approaches in implementing positive education. The school started with establishing a school vision that guided the determination of school practices; then it proceeded to restructuring and condensing the school curriculum to reflect the school vision (e.g., reducing number of examinations, four-step learning to build cooperation). The school also conducted staff development via co-teaching, peer observation and teacher training (e.g., seminars on well-being); developed a learning culture that allowed students' agency and freedom to structure their learning and obtained internal and external resources to support school development. The school was perceived as adopting a generally top-down approach, with a few teachers reporting lack of motivation to enact the changes. A key limitation of the study is the exclusion of students as respondents in the evaluation of programme impact.

The present study will supplement the scant literature on positive education set in Asian educational contexts. It addresses the limitations of the aforementioned studies (Au & Kennedy, 2018; Zhang, 2016) by conducting an evaluation of a school's positive education programme after a six-year period of implementation and involving data obtained from school leaders, teachers, and students.

Theoretical Framework and Research Objectives

To make sense of the different processes and factors that enable schools operating in Asian settings and adopting positive education approaches to promote students flourishing, self-determination theory (SDT) can be a potentially useful framework. SDT is a theory of motivation and development that is concerned with understanding the factors that either facilitate or thwart adaptive and growth-oriented processes, internal motivation, social functioning, and well-being in individuals (Niemiec & Ryan, 2009). SDT suggests that individuals flourish, achieve goals and feel greater

well-being under conditions that support the fulfilment of their three psychological needs: the need for competence, which pertains to the need to have a sense of mastery and effectiveness in ones' activities and achieve goals; the need for relatedness, which corresponds to the need to feel connected to others and to have caring relationships; the need for autonomy pertains to having a sense of choice in the initiation, maintenance, and regulation of own actions (Deci & Ryan, 1985, 2000). The willingness of teachers to persist in an educational innovation was found to be related to their perceived school support for their basic psychological needs (Lam et al., 2010). Allowing for teacher to exercise autonomy; that is, to take part in shaping and adapting the school innovation design and implementation, was found helpful in gaining a high degree of teacher buy-in to and ownership over the innovation (Redding & Viano, 2018). To our knowledge, SDT has not been applied in elucidating how positive education applied in schools can influence students' well-being and learning outcomes.

To address the aforementioned gaps, this study will focus on an Asian school's journey in positive education using SDT as a lens. In particular, this study will address the following research questions:

(1) How did the school develop and enact a whole-school approach to positive education?
(2) What were the key approaches that the school adopted in enacting a whole-school approach to positive education in an Asian education setting?
(3) What was the impact of the school's whole-school approach to positive education?
(4) What were the key challenges that the school faced in implementing whole-school approach to positive education?

Methodology

School in Focus: Westwood Primary School

Westwood Primary School (WWPS) was selected as the focus of the study because of its history of being a pioneer on positive education in Singapore. WWPS is a co-educational public primary school with a student population of about 1400 students from Primary 1 (P1, about 7 years old) to Primary 6 (P6, about 12 years old). WWPS is one of the seven new primary schools introduced by the Singapore's Ministry of Education (MOE) in 2013 to respond to changing demographics in selected neighbourhoods. At that time, MOE was steering public schools in Singapore towards holistic education and equipping students with twenty-first century competencies (WWPS, 2012). Just like the other new schools, WWPS adopted an incremental model of growth, with a new cohort of P1 pupils entering the school in each subsequent year, and the school achieving a steady state only in the sixth year of establishment. WWPS aspires to deliver high-quality education to nurture

twenty-first century-ready learners with deep anchors of character to flourish and thrive. The school's mission is to provide positive education that nurtures thriving teachers and flourishing pupils. With the vision of being a positive institution that inspires the community to lead meaningful and engaged lives, the school focuses on nurturing students to possess the character strengths of gratitude, resilience, passion for community, and future-ready confidence.

Research Design

A case study approach was used in this study. This approach was deemed as appropriate to examine a complex phenomenon that is deeply entrenched in a particular context. Using this approach, rich insights can be gleaned on the following: the conceptualization and enactment of a positive education curriculum, the processes and practices involved in implementing the curriculum, the challenges faced by school leaders and staff in carrying out these practices and processes, and how these aspects of curriculum implementation are influenced by ecological factors, such as socio-cultural values and characteristics of stakeholders.

Data Sources

The main data source for this study was a series of semi-structured interviews that were conducted by the second author in March 2020. The interviews were done with members of the school leadership team, including the school principal (PN), vice principal (VPR), teachers (T1 and T2) and school staff developer (SD). Each interview lasted for about 30–45 min and were audio-recorded. The interview questions were aligned with the research questions. The questions were as follows: (1) "What strategies were applied by the school to improve students' wellbeing? How have these strategies been enacted?" (2) "What were the effects of these strategies?"; (3) "What were the factors that helped in enacting the positive education curriculum?"; and (4) "What were the key challenges faced in enacting the positive education curriculum?" Follow-up questions were asked to the interviewees to clarify some of their responses. The audio files of the interviews were transcribed verbatim.

School documents and artefacts served as additional data and information sources. These include school research reports, school development plans, promotional materials, teachers' handbook, and students' reflections. Information from these sources were triangulated with findings from interviews (Patton, 1999) to generate a more credible understanding of potentially effective practices and their impact for promoting student well-being and holistic development.

Data Analysis

Thematic analysis (Miles & Huberman, 1994; Mills et al., 2010) was used to analyse the interview transcripts. To do so, the transcripts were read thoroughly, and some themes and patterns were identified; this was followed by classifying and coding of the transcript segments according to themes (Mills et al., 2010). The codes were reduced and refined to form similar categories by identification of similarities in meaning and patterns, after which themes that cut across the dataset were identified (Miles & Huberman, 1994) and linked to the research questions. The authors alternately carried out the coding process and extraction of themes, and then engaged in careful reading of codes and themes generated by each other; in cases when differences in perspectives occur, they engage in a series of discussions until a consensus was achieved.

Results and Discussion

Development of the Framework for the School's Positive Education Curriculum

According to the founding principal of WWPS, Mr. Ng Yeow Ling, the school, like other newly established school in Singapore, was given the autonomy by MOE to create a unique value proposition to be articulated in its vision, mission and values within the larger framework of the Singapore national curriculum. With a strong belief that education should be holistic and that a school can only flourish if students and staff well-being are taken care of while pursuing excellence, Mr. Ng chose positive education as the school's underpinning philosophy (Building a Flourishing School Community, 2018). Mr. Ng wanted his new school to provide an education that provides equal emphasis on academic excellence and well-being.

As a starting point, the WWPS core team (i.e., school leaders, teachers and school staff) applied a positive and collaborative approach known as Appreciative Inquiry (AI; Cooperrider & Avital, 2004) to help define a new school culture that can facilitate goals aligned with the principles of positive education. The team carried out a school-wide strategic conversation and envisioning journey following AI iterative stages of *Discovery*, *Dream*, *Design* and *Destiny*. Through this process, WWPS also tackled teacher beliefs and discussed the student outcomes and teaching–learning framework (WWPS, 2012). The envisioning journey led to the generation of the school's curriculum framework which covers key areas to emphasize to promote students' flourishing: These areas include thinking mindfully, healthy coping, relating well, being in the moment, values-driven actions, and emotions of positivity (THRIVE, see Fig. 12.1). The THRIVE framework can be mapped to the PERMA framework (Seligman et al., 2005), which has been shown to be applicable in classroom settings and effective in promoting outcomes, including, but not limited to, positive

emotions, relationships, and motivation in several school contexts (Au & Kennedy, 2018; Shohani et al., 2016; Williams, 2011). When it comes to the process of implementing the THRIVE framework, WWPS adapted the Learn, Live, Teach and Embed principles (Norrish et al., 2013; see Fig. 12.2).

The participation of various groups within the school community in the formulation of the school vision and the identification of different approaches to turn this

Fig. 12.1 Westwood Primary School's total curriculum framework

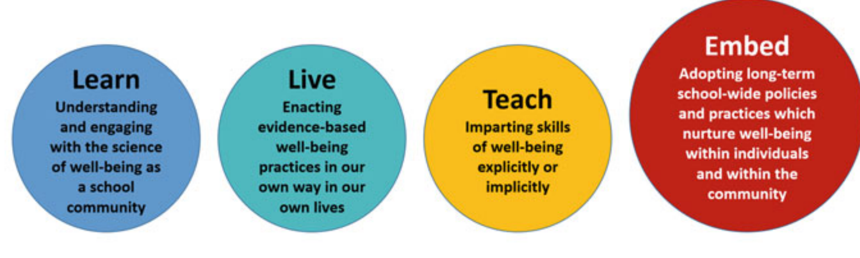

Fig. 12.2 Westwood Primary School's framework for applying positive education

vision into a practical reality engenders a sense of autonomy (Redding & Viano, 2018) and ownership among members of the school community. This move can also foster a holistic a vision and common understandings of teaching and learning among schoolteachers and leaders (Mogren et al., 2019).

Strategies and Enablers in Enacting a Whole-School Approach to Positive Education

A whole-school approach for the implementation of positive education can facilitate sustained positive change (Hoare et al., 2017; Richard et al., 2012; Weare & Nind, 2011). We identified key strategies that WWPS adopted in enacting a whole-school approach after analysing the interview transcripts of selected school staff and school documents. The school documents were used to find examples of what the school staff described during the interviews.

Explicit Linking of Learning to the THRIVE Framework

WWPS created structures and opportunities for teachers and students to explicitly link intentional and incidental learning to the THRIVE framework. SD shared several examples illustrating how the THRIVE framework is operationalised in activities inside and outside of the classrooms. "For every assembly session, the last slide will be 'How is this linked to THRIVE?'". He further added that the THRIVE framework can be found at the back of every classroom in such a way that "if they [the teachers] see teachable moments shown by any of the pupils, they can bring them [the students] to the back of the classroom and link it to the THRIVE [components]". In addition, when we examined the school's teacher lesson observation template (see Fig. 12.3), we found some visible indicators of the THRIVE framework; this guided the teachers in designing learning that is consistent with the framework.

The conscious linking of learning to the THRIVE framework allows for constant practice that can promote the formation of positive education habits. T1 supported this view in explaining that:

> Positive education cannot be a one-time lesson. It has to be a consistent practice to develop the habits in the child so that they can apply it effectively. Things like "catch- you-doing-good" is not a once off event but [done on] a daily basis where the teachers are looking out for students exhibiting good behaviour.

The provision of structures and opportunities for teachers and students to engage in explicit linking of learning to the THRIVE framework served as a means to improve the staff's sense of competence to enact the curriculum. Using Vygotsky's (Cole et al., 1980) terms, these structures serve as scaffolds that can push the school staff and students towards a higher level of functioning, which is beyond what they can normally do independently.

Put a (✓) if used	Positive Education Strategies & Routines, FA, STP	Technique/ Tool Used (To fill in details)	Is this a class routine?
	Specific Focus on Pupils' Progress and Growth ○ **Thinking Mindfully** (Pupils understand the Growth Mindset)	(e.g. reward structures, using pupils' good work, using differentiation to meet differing pupils' needs)	Yes/No
	Facilitating pupils' management of emotions and focus ○ **Healthy Coping** (Pupils are able to manage thoughts, focus and emotions)	(e.g. using songs in classroom management, having centring exercises, explicitly addressing pupils' behaviours and highlighting good behaviour)	Yes/No
	Nurturing the class community ○ **Relating Well** (Pupils are able to work well with one another and have a sense of belonging) ○ **Emotions of Positivity** (Pupils appreciate one another)	(e.g. affirmation of pupils' contributions, group management strategies)	Yes/No
	Creating an innovative, engaging curriculum ○ **In the Moment** (Pupils are engaged and keen to learn)	(e.g. using ICT for immediate feedback/customised feedback)	Yes/No

WESTWOOD PRIMARY SCHOOL

Part of Lesson Observation Template

Fig. 12.3 Excerpt of a lesson observation template being used at Westwood Primary School (Rafik, 2019)

Empowering Leadership

The staff members interviewed unanimously asserted that an empowering leadership is a key enabler to enact a whole-school approach to positive education. The different aspects of an empowering leadership that was practiced in the school can be gleaned from the responses of the interviewees. For SD, the achievement of the school's positive education goals "must start from the leadership"; he also highlighted the importance of having "the leaders believe in it". According to T1, the "clear direction from school leaders and middle managers, very clear outcomes and the review process" facilitated the implementation of the school's positive education programmes. VPR suggested that the conviction shown by the leadership team was key in actualizing the principles of positive education.

> My Key Personnel (KP) team is very supportive and very positive when it comes to these things. The email that I sent you on hosting the guests, it is not just one person. Different KPs take turns to host them. It is like a very big team and everyone believes in it. There is a lot of conviction. If the staff has conviction and the KP can role-model, that will bring across very clearly.

Just like VPR, PN and T1 also emphasized that role-modelling is a key aspect of effective leadership. PN explained that role-modelling by leaders is essential in developing a culture oriented towards positive education.

> You must first learn yourself, then you become a role model. You become the one to teach them and then you extend to the bigger group. When people are taught and they reciprocate, that is when the culture is formed.

The school leaders provided competence support for the school staff by role modelling and expressing clarity of goal posts and outcomes. In addition, the school

leaders' expression of trust in the capability of the staff can serve as a key element in building a positive sense of relatedness.

Continuing Professional Development and Adaptive Customisation of Resources

On-going professional development with reflections by staff followed by adaptive customisation were also deemed crucial in enacting the positive education curriculum. These points were illustrated when Teacher T2 described how the teachers were trained on mindfulness.

> We did sharing and professional development workshops with the teachers-- what mindfulness is and how they can do it in their daily lives. We asked them to carry it out and experiment with their class. And through the observation, we realised that teachers have different practices and we share the good practices. [However] teachers were also not sure when they could conduct it… There were varied practices in the classroom… We came together and did mindfulness in the canteen for a year and a half. …Now the teachers are experts. They know [how to do it] as they tried and went through the daily routines. The pupils also know what a mindfulness exercise [is]. The teachers know the different ways of doing it and a consistent approach…Everyone is on the same page and they know how to conduct a mindfulness exercise [independently] in the classroom.

Similarly, T1 described how the school carry out continuing review and adaptation for all new programmes and processes:

> We have termly reviews. The heads will experiment, try out and then review, modify and then try a new strategy. We do this when we try something new.

T2 highlighted the importance of adaptive customisation for the teachers and by the teachers. This practice mirrors a good deal of respect for and consideration of the individual differences, including strengths and weakness, of school staff and students. She describes the review process undertaken by the school as follows:

> In terms of review with teachers it is more about asking the teachers about their strengths and the challenges and pitfalls they have. We [the leadership team] will also take ownership by giving suggestions, how they can change it so that we can understand how they want to carry out their practice…the fact that everyone is different affects the way in carrying out different things. We can have a standard practice but human beings are very different. Even the class profile, pupils you get in different years, means we have to adapt to human behaviour as well.

The school's adoption of continuing professional development can boost the satisfaction of two psychological needs of the school staff. As the teachers were actively involved in the shaping of the practices aligned with the positive education curriculum, there is greater likelihood for them to enhance their sense of autonomy (Redding & Viano, 2018). Continuing professional development is also one of the hallmarks of school improvement models (Mogren et al., 2019). As the school staff learn new skills through training and extensive opportunities for practice, they can develop a greater sense of competence and efficacy. This is further enhanced by the high regard for individual differences that the school leaders convey to the teachers.

Active Partnerships with Stakeholders

The school formed partnerships with education stakeholders, such as parents, members of the community and researchers. The school actively educated and involved the parents in the school's positive education journey. PN reported how the school engaged the first author, who is an education researcher, to conduct a talk to the parents on positive parenting and subsequently the school "integrated the parent engagement as part of our regular work". As an example, he mentioned the following task that the school created for parents and children to carry out.

> At P3 we have this Thriving Together booklet. It is [a] homework for parents and kids. It outlined some positive education strategy that we want parents to do with the kids. There are some activities and some conversational pieces. That is our way of getting the parents on board.

Similarly, VPR stated that the school got the parents to write on the *Board of Positivity* when they attended the Teacher-Student conference.

The school's research partner also supported the school's research in relation to data collection and analysis of programme impact. PN explains:

> As we try out strategies, it is very difficult for a school to say do a pretest or baseline test and at the end do a posttest…. Two years ago, some of the [research] work gave us some indication that the work has some impact on the students' confidence.

Partnerships with the community extended positive education learning opportunities for students. According to SD, the school collaborates with community partners to engage the students in doing acts of charity to needy members of the community. He explains:

> We don't do it on our own but we partner with the Residence Committee who know their needs. They give us a list of what they need e.g. toilet paper, baked beans…. When we do that, we also impress on the students that when we do good deeds, we want to meet their needs and not just your needs. You want to help others, you find out what they need first.

SD also shared about another partner of the school that provides opportunities for the students to play the more knowledgeable other to younger children:

> The kindergarten next to the school is another community partner for the school. Our CCA groups will be buddies for the kindergarten kids. The speech and drama group will perform for them, play games. The green club will show them how to grow plants. There are a lot of valuable opportunities when you have a kindergarten [next to you].

The school's partnership with parents and community groups creates social bridges that extend the school's positive education curriculum beyond the school premises. The students were able to form bonds with their parents and members of the wider community, thereby supporting their need for relatedness. Links formed with researchers and community members provide a means for the school to harness external resources to boost the sense of competence of parents and students.

Impact of the School's Positive Education Curriculum on Students

We identified the impact of the school's positive education curriculum implementation using the ideas and observations of school staff, as expressed during interviews, and the extracts of a report on retrospective research conducted by the school, with support from a researcher on positive education (Caleon, 2018; Rafik, 2019). An additional indicator of impact was the feedback elicited from stakeholders (i.e., students, parents, partners, and teachers), formally through surveys and informally through other platforms (e.g., comments in social media and personal communications). The results of these feedback were reported by the school staff during the interviews.

Development of a Well-Being Culture

The development of a culture centred on promoting well-being can be gleaned from the responses of selected school staff during the interviews. VPR mentioned that "it is like a very big team and everyone believes in it … You can sense it and feel it. When you step into the class you can feel the school's positive education culture". She also highlighted how the students imbibe this culture in their lives:

> Along the way as they grow and they mature, you see some of these positive practices in them. You teach them "stop-think-do" and mindfulness. Over time they really intrinsically practice them.

SD underscored the development of a new language, which is key in the formation of a well-being culture and in the learning process (see Vygotsky, 1978).

> Now, we have this whole language to guide how relationships and connections can be done moment to moment, person to person. It will create this culture of well-being…If you can go to the classroom and speak to the pupils now, it has become part of their vocabulary, gratitude, resilience… It is not a programme already. It is part of the culture.

One teacher (T1) noted that the school's positive education culture even reaches students' homes: "As time goes by the parents get used to it. The pupils bring home cards and share on *Facebook*, [such] that over the years, the parents got influenced and got more open".

The well-being culture that was borne out of the approaches adopted by the school can serve as a cradle for the development of students' socio-emotional as well as academic competence. This culture that permeates the school milieu also functions as a social glue among pupils, among school staff members, between pupils and teachers, and between pupils and parents, that can boost their sense of connectedness.

Improvement in Well-Being and Holistic Development of Students

The results of the retrospective research conducted by the school suggest the positive effects of the school's positive education curriculum on students' development and

well-being (Caleon, 2018; Rafik, 2019). The study involved 223 P6 students who made drawings about their past and present self and described how they changed emotionally and mentally from P1 to P6. The students also gave ratings of a subset of the participants ($n = 178$) of their happiness level over the six years that were elicited through the *My Westwood Journey* sheet (Caleon, 2018). Samples of students' responses are shown in Figs. 12.4 and 12.5. The results of the study showed that out of 178 students, 59% had mostly positive and a few instances of negative levels of subjective well-being (SWB), 36% of the students' had partly positive and partly negative levels of SWB, and only 2% with mostly negative levels of SWB from P1 to P6. The description of 223 students of their six-year development that were broken into 327 coded responses showed improvements in social (e.g., *talk to people more easily*; *before people and peers avoided me, now I made new friends*; 24% of coded responses), psychological (e.g., *became more confident*; *became more resilient*; 43% of coded responses), emotional (e.g., *more happy*, *stronger in my emotional and inside self*, 14% of coded responses), cognitive (e.g., *became smarter and more strategic, now ready to explore more things*; 13% of coded responses), and behavioural (e.g., was shy and quiet, now active; *more effort in work*, 7% of coded responses) aspects.

In summary, the students' responses suggest their growth in multiple domains, with social and psychological development being highlighted by more of the students. The large majority of the students indicated predominantly positive and high levels of SWB. The results also suggest that the school's positive education programme had some positive impact on the students' sense of competence in dealing with social and psychological challenges and the quality of their social relationships.

While the results of the study indicate positive development of students after 6 years of immersion in a positive education culture, it is heavily reliant on student's memory and may have higher levels of uncertainty in relation to the baseline levels of students' well-being and social, emotional and psychological states.

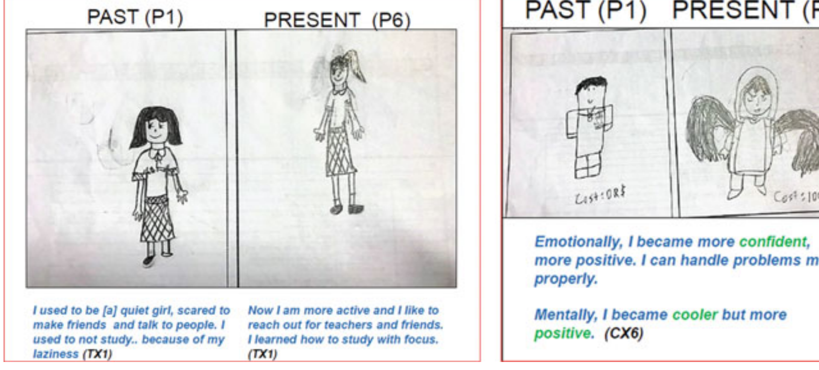

Fig. 12.4 Drawings and descriptions of two primary students on how they changed from Primary 1 (P1) to Primary 6 (P6). *Note* Texts shown are verbatim responses of students

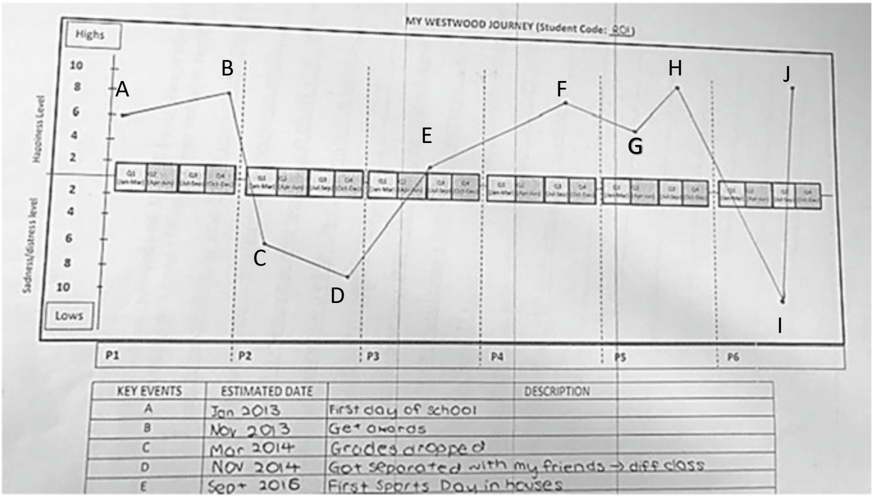

Fig. 12.5 Sample response of students showing their level of subjective well-being from Primary 1 (P1) to Primary 6 (P6)

Challenges and Lessons Learned

Over the six years of implementing a positive education curriculum, the school encountered a number of challenges. These challenges include (1) the realization that things may not seem to work in the early stages of programme implementation, (2) having varied levels of staff preparedness, and (3) inadequate tools and structures for rigorous impact assessment.

Things May not Seem to Work at the Early Stages of Programme Implementation

Implementing a new curriculum calls for perseverance and buy-in of school staff as they move forward in the iterative process of trying, reflecting on and improving their plans and actions towards realizing the school's vision. This is because at the early stages of the implementation, things may not seem to work. T1 said:

> In this journey, some teachers say it doesn't work after trying. Sometimes it is very disheartening. Certain things need time to build out. The mindset has to be changed. It is not easy.

To deal with this challenge, T1 proposed:

> You have to say, let's give it some more time. Is the process not right? What is the problem? Try to make things better. We hear the teachers and that is why the reviewing is on-going. You may see the impact later, not so fast.

The above point of T1 was supported by PN:

> As we try out new things, there will always be times when you have to back paddle and then look at the fundamentals again. You also cannot go around in circles and have to advance.

Variations in the Levels of Staff Readiness, Competence and Mindset

As the school progressed towards its goals and school staff expanded, they also have different levels of readiness, competence, and mindset to embrace positive education. The school leaders acknowledged this challenge although they seem to understand that different people will need different ways of engagement. PN noted the challenge of managing "the tension that you have to hold between people who are ready and people who are not". At the same time, he acknowledged the importance of giving leeway for some colleagues to slowly engage in the implementation process: "I guess we have to leave it quite organic for them. We don't think everyone needs to come on board straight away in a very linear way. We are quite ok to leave them to slowly discover".

Similarly, VPR mentioned: "Not all of them buy into that, to the level that we would like". VPR then indicated a way to manage this challenge: that is, inspiring colleagues "to have the belief in themselves that this is something worth doing".

Planning for Impact Assessment at the Outset

Although the school utilized several approaches (e.g., survey, feedback, interviews of school staff) to gauge the effectiveness of its positive education programmes, these were not embedded in the planning of the curriculum and were done retrospectively. SD aptly described this point: "We had surveys but in hindsight, we could have followed the pioneer batch more [closely]. For example, if we collected data of the pioneer batch in 2013, the data could have been richer". The same point was acknowledged by PN: "In hindsight, if we can rewind the clock, I would want to start with some baseline measures of well-being". The school, according to VPR, is now developing a survey tool that can capture the extent or level to which students demonstrate the behavioural indicators of outcomes and attributes that are linked to the THRIVE framework. She believed this will help the school in tracking students' progress.

Conclusion and Implications

The results of the present study surfaced several noteworthy strategies utilized by WWPS to develop and enact a positive education curriculum that generated promising results. These strategies can be perceived as means to support the psychological needs

of the school staff. A number of strategies that the school applied can potentially promote the sense of competence and self-efficacy among the members of the school community. First, the school leaders inspire staff empowerment as they serve as good role models and present clear goals and vision for the school staff. Second, the school implemented on-going professional development programmes that allowed the staff to learn, apply and reflect about the principles of positive education. Third, the school provided structures and opportunities for the teachers, as well as the students, to explicitly link learning activities to the school's positive education framework.

A high level of support for autonomy and regard for individual strengths of the school staff can also be noted amongst the strategies adopted by the school. The teachers were encouraged and given opportunities to be actively involved in the development of the school's positive education curriculum and the adaptive customisation of the key programmes and practices forming the curriculum. The teachers were also given leeway in the classroom implementation of the practices suggested by the school.

The school also emphasized and leveraged multiple partnerships with education stakeholders—this can boost the sense of connectedness among members of the school community. The feeling of being in a "very big team" was expressed by staff members. Parents and children took part in positive education activities as a team. The students were also able to connect with community members who need support. The partnership with an education researcher helped the school to develop some of its programmes and assess the impact of implementing its curriculum.

All the aforementioned strategies could potentially enhance the willingness of the school staff to sustain the adoption of the positive education practices that has taken roots in the school, as was also reported in the study of Lam et al. (2010) and Redding and Viano (2018). We also found evidence suggesting that these strategies led to the development of a well-being culture and holistic growth of students. This well-being culture could have served as an immersive environment where students and teachers use a common positive education language and apply well-being principles not just in school, but also in their daily lives. Having immersed in such a culture for six years, the results from a retrospective research done with the first graduating batch of WWPS students suggest that they developed social and psychological skills, with most of them indicating positive and high levels of well-being. The well-being culture also served as a social glue among the members of the school community. These results provide evidence for the potential of a positive education curriculum to boost the sense of competence, at least in the social and psychological domains, and sense of relatedness of students.

The results presented in this study were drawn from interviews with school leaders and teachers, as well school documents that include a research report on students' development over six years. Evidence of the effectiveness of the positive education programmes of WWPS was based on a retrospective study. The lack of a baseline measure of student well-being and target outcomes is a key limitation of this study. For future studies, it would be advisable to include assessments of key outcomes before and then at various stages of the curriculum implementation and involve a comparison or reference school to draw more valid casual conclusions on the impact

of the focal school's positive education programme. In addition, eliciting multiple perspectives, not just of school staff members but also parents and students, will also generate more robust insights into the nature and quality of strategies to effectively enact a whole-school positive education curriculum.

Notwithstanding the above limitations, the findings of the study enriched our understanding of a whole-school enactment of positive education curriculum within an Asian educational setting. We hope that other schools with interest in promoting well-being and flourishing of students can draw insights from the positive education journey of WWPS.

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Chapter 13
Academic and Social Skills Building Seminar and Gratitude Intervention

Ma. Jenina N. Nalipay, Cherry E. Frondozo, Mark Harrison, and Ronnel B. King

Abstract In this chapter, we described how a gratitude intervention, which aims to increase student well-being, was integrated with Academic and Social Skills Building Seminar (ASSB), which aims to develop academic skills among students—in line with positive education's goals of incorporating a well-being component to traditional education. In Part I, we provide an overview of the gratitude intervention and ASSB, and the basis for their integration. Part II describes how the gratitude intervention was integrated to ASSB, and presents the modules of the integrated program. Lastly, in Part III, we describe the pilot implementation of the integrated program, feedback from students and counselors, and insights gained from its initial implementation. Then, we present the recommendations for an improved program based on the findings of the pilot study and discuss future directions for program implementation and research.

Keywords Gratitude · Positive education · Program development

Practitioner Points

- The program was well-received and was helpful in developing the social skills and gratitude of the students. It also helped the students learn about dealing with conflict and being more in control of their emotions.
- The counselors noted that incorporating gratitude activities with academic and social skills building seminar helped students deal with the academic demands, facilitated the enhancement of students' well-being, and provided students opportunities to interact and learn from each other.

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Academic and Social Skills Building Seminar and Gratitude Intervention

Traditionally, the focus of schools is on accomplishment—preparing students for their future profession, and honing them to become successful, literate, and knowledgable individuals (Seligman et al., 2009). However, the long-term impact of childhood and adolescent well-being on success in various life domains (e.g., sociodemographic, psychological, and social outcomes) (Richards & Huppert, 2011), and the synergy between student learning and well-being (Seligman et al., 2009) has recently been gaining attention. Thus, positive education calls for a paradigm shift in schools to provide students with education not only for traditional skills that would help them accomplish, but also skills that would assist them in nurturing their well-being (Seligman et al., 2009).

In this chapter, we describe the development and pilot implementation of a program that integrates gratitude intervention, which aims to enhance students' well-being, with the Academic and Social Skills Building Seminar (ASSB), which aims to provide students with the necessary skills for academic achievement and to assist them in their school life. The chapter has three parts. Part I provides an overview of the ASSB and gratitude intervention, and the basis for their integration; Part II describes the integrated program and its development; and Part III describes the pilot implementation of the integrated program, learning and insights, and future directions.

Part I: Overview and Framework of the Program

The Academic and Social Skills Building Seminar (ASSB)

The Academic and Social Skills Building Seminar (ASSB) was designed to serve as a resource to assist Year 6 (Y6) and Year 7 (Y7) students in the development of skills that would be helpful to them in the International Baccalaureate (IB) Middle Years Program (MYP).

Specifically, the course focuses on developing students' skills that could assist them in their academic work and school life, and providing them with a safe and supportive learning environment where they can practice new skills and experience support and guidance.

The course was built around the Approaches to Learning (ATL) prescribed for use by the IB MYP (Middle Years Program), which is grounded on the philosophy that "learning how to learn is fundamental to a students' education" (International Baccalaureate Organization, 2013, p. 7). The ATL aim to develop among students five skills that could empower them to become self-regulated learners with knowledge of inquiry and effective goal-setting, and who possess the determination to pursue and achieve their aspirations. These are the following: (1) *thinking*

skills (critical thinking, creative thinking, and ethical thinking); (2) *research skills* (comparing, contrasting, validating, and prioritizing information); (3) *communication skills* (written and oral communication, effective listening, and formulating arguments; (4) *social skills* (forming and maintaining positive relationships, listening skills, and conflict resolution); and (5) *self- management skills* (organizational and affective skills) (International Baccaulaureate Organization, 2013). The course has six modules that focus on the ATL: (1) Self-management; (2) Communication; (3) Critical Thinking; (4) Collaboration and Social Skills; (5) Research/Self- management; and (6) Research/Communication (see Table 13.1). The ASSB maps into the MYP ATL skill cluster of affective skills, which involves positive reframing in order to increase self- motivation and resilience (International Baccalaureate Organization, 2013). Given that gratitude increases one's attention to positive frames of thought (Lambert et al., 2012) and increases well-being, the ASSB was developed with a gratitude intervention to also enhance well-being outcomes of students.

Gratitude Intervention

Whereas the ASSB focuses on skills that could help students achieve and become successful in their academic program, the gratitude intervention focuses on developing students' affective skills and well-being. We selected a number of gratitude activities based on the Socially Oriented Gratitude Intervention (SOGI; Caleon et al., 2017), which intends to improve students' gratitude and the quality of their relationships with their parents, teachers, and peers . By integrating gratitude activities from SOGI to ASSB, we were able to come up with a program that targets both the development of students' skills for learning, affective skills, and the enhancement of their well-being. This is consistent with the aims of positive education and with prior research showing that gratitude is also positively linked with learning-related outcomes (King & Datu, 2018; King et al., 2023). The following are the gratitude activities included in the integrated program:

Counting blessings—in this activity adapted from Emmons and McCullough (2003), the students were asked to list down everyday gifts or blessings—things that they are grateful for— and share this list with their peers and explain why they are thankful for these gifts or blessings they received. Acknowledging life's blessings and being grateful for it can induce positive emotions and avoid them from being taken for granted (Lyubomirsky et al., 2005). This activity has been found to be effective in nurturing gratitude, increasing positive emotions and life satisfaction, and decreasing negative emotions and depressive symptoms (Emmons & McCullough, 2003; Gander et al., 2012).

Reframing with gratitude—in this activity, the students were shown an unfortunate scenario and were asked how they feel. Then, they were shown another scenario, which is worse than the first one, thereby making them feel more grateful about what happened in the first scenario. The students were then taught about reframing as a

Table 13.1 Outline of the integrated program

Session	Target ATL skill	Activities/Key message
Session 1	Self-management	• Establish ground rules—PM • Ice-breaker game—PM • Establish ground rules • Understand the importance of all our emotions such as anger, fear, discomfort • Identify ways to express emotions appropriately • Relax/Care for yourself—Before we try to deal with problems, we should take care of our emotions first • ***Counting blessing***
Session 2	Communication	• Review ground rules • Understand the difference between passive, assertive and aggressive communication • Introduce 'I statements' and practice assertive communication
Session 3	Critical thinking	• Review ground rules • Ice-breaker game—PM • Take Action—When facing a problem, we need to break it down to see what is out of our control and what can be changed. (Problem-solving will be a them that will run throughout all sessions. We will tie things back to this concept.) • Goal setting—Set goals that are challenging and realistic • ***Reframing with gratitude***
Session 4	Collaboration and social skills	• Review ground rules • Giving feedback—being helpful and constructive, not critical • Receiving feedback—using feedback as an opportunity for growth • ***Gratitude card***
Session 5	Research/ Self-management	• Review ground rules • Consider the effects of social media on perception of self and others • Management of online impulsivity and distractions (tie into problem-solving and goal setting)
Session 6	Research/ Communication	• Review ground rules • Poster presentations with concluding ideas • ***Digital storytelling***

Note Texts in ***bold and italicized*** refer to the gratitude activities from SOGI that were integrated to the ASSB. ATL = approaches to learning

way to deal with challenges by thinking about how things might have turned out even worse if a person or event was not present, making them feel grateful for that person or event. Research has shown that gratitude through positive reframing could lead to fewer depressive symptoms (Lambert et al., 2012) and an increased sense of coherence (Lambert et al., 2009).

Gratitude card—in this activity, the students were asked to write and draw on a card to express their gratitude to a particular person. They were provided with various materials that they could use to decorate the cards. The students were given an option on whether they would like to deliver the letter to the recipient or to keep it for themselves. This activity is based on the notion that writing can help organize one's thoughts and feelings; create a greater sense of coherence, meaning, and control, and promote self-understanding, thereby increasing one's positive emotions and well-being (Caleon et al., 2017).

Digital storytelling—in this activity, the students were asked to reflect about the things they are most grateful for in life and to write a story about it. They were then told to create a digitized version of these stories using online programs such as Storybird (https://storybird.com/) Zimmer Twins (http://www.zimmertwins.com/splash), or StoryJumper (https://www.storyjumper.com/), and share these digital stories with their peers. This allows the students to have fun and be creative while reflecting about the things they are grateful for and expressing their gratitude.

Gratitude, Well-Being, and Academic Achievement

In accordance with the goal of positive education to incorporate well-being into traditional education that focuses on accomplishment, we decided to integrate gratitude intervention into a course that aims to equip students with the skills they need to perform well academically (i.e., ASSB). We specifically focused on gratitude because of its association with the development of affective skills in ATL and its widely supported relationship with well-being.

Past studies have shown that gratitude could increase one's well-being. It has been found that gratitude enhances one's appreciation of positive events in the world, thereby promoting higher life satisfaction (Datu, 2014; Emmons & McCullough, 2003; Kong et al., 2015), positive affect (Nezlek et al., 2017), and well-being (Emmons & McCullough, 2003; Kong et al., 2015). Gratitude is also positively associated with an enhanced sense of meaning (Datu & Mateo, 2015; Kleiman et al., 2013) and personal growth (Ruini & Vescovelli, 2013), and could serve as a buffer against negative outcomes such as stress, depression, and negative affect (Froh et al., 2008; Lambert et al., 2012; Wood et al., 2008).

Considering that student well-being and learning are synergistic (Seligman et al., 2009), gratitude could potentially enhance positive learning-related outcomes, too (King et al., 2023). The broaden-and-build theory of positive emotions (Fredrickson, 2001) could provide an explanation on how gratitude can promote well-being, and how this could enhance positive learning-related outcomes. Broaden-and-build theory posits that positive and negative emotions have different functional roles. Whereas negative emotions narrow the range of cognitions and behaviors, which leads to a downward spiral of resource loss (Fredricks et al., 2004; Fredrickson, 2001), positive emotions, such as gratitude, expand the range of one's mindsets and

action sequences. These broadened mindsets and behaviors lead to the accumulation and consolidation of key psychological resources (Fredrickson, 2001; Kok & Fredrickson, 2015).

Indeed, studies in academic settings have provided support for the link between positive emotions and positive learning-related outcomes. Positive emotions have been found to predict key indicators of school functioning (Datu & King, 2018; King et al., 2015; Pekrun et al., 2002; Reschly et al., 2008). Moreover, inducing positive emotions has been found to be associated with intrinsic motivation (Isen & Reeve, 2005), use of adaptive cognitive and meta- cognitive strategies (King & Areepattamannil, 2014), effort exertion (King et al., 2015), and academic achievement (Pekrun, 2006). Thus, as a positive emotion that promotes well-being, gratitude could also give rise to other psychological resources that could help students perform well academically.

Part II: The Integrated Program

Development of the Integrated Program

The school counselors and university research team worked collaboratively in developing a program that integrates student well-being with the enhancement of academic skills. This was done by integrating some of the gratitude activities from the SOGI with the ASSB. Because both the SOGI and ASSB also cover the development of students' social skills, and consist of group activities that can be implemented in class settings, we were able to seamlessly incorporate the gratitude intervention with the activities within ASSB. The activities that were included in the integrated program were selected considering the students' needs and were designed to be as active and engaging as possible.

Modules of the Integrated Program

Table 13.1 shows an outline of the modules of the integrated program. The program was implemented to Y6 and Y7 students. The sessions were administered by school counselors during students' lunchtime, and each session starts with a mindfulness/grounding exercise (e.g., self-management, managing of the mind, practice strategies to develop mental focus) and lasts for about 45 minutes.

Part III: Pilot Implementation of the Integrated Program

Pilot Implementation

The pilot implementation of the integrated program was conducted in a school that follows the IB curriculum (International Baccalaureate Organization, 2013). Parents of Y6 and Y7 students were provided with an outline of the program with its aims and a brief overview of the content. Parents signed up their children for the program on a first come, first served basis. Out of the 27 students who were signed up for the program, 22 students (8 females, 14 males; 16 Y6, 6 Y7) participated in the pilot implementation (dropout rate was 18%), and 82% ($n = 18$) of whom attended at least 3 of the 6 sessions. The students were divided into three groups, each group assigned to a school counselor, who were trained and provided support by the university research team.

All the sessions were conducted in a classroom setting during lunchtime and lasted about 45 minutes. Students were seated in a circle around a long table to facilitate group discussion.

The sessions were observed by a research team member for fidelity check. The observation protocol included attendance, the activities conducted, and the receptivity of the students of the program. At the end of the program, 10 students and two counselors were interviewed to solicit feedback and to get their insights about the program.

Feedback and Insights Gained from the Students

Ten students were interviewed. The students were asked about how they felt about the program, what activities they liked and disliked, and their recommendations for future sessions. Responses were content analyzed and were categorized into themes. Table 13.2 shows some of the themes that came out during the interview.

General Feedback

Majority of the students found the program fun. The program also served as a venue for the students to meet and make new friends with other students. They also found the counselors who implemented the program nice and informative.

Learnings

In general, the students learned about social skills and became more grateful during the sessions. They reported that the sessions made them think of what they were

Table 13.2 Students' feedback regarding the program

Themes	Subthemes	Sample responses
Learnings	Made them think of what to be grateful for	*"And also about gratitude and to be mindful of others and we also wrote a gratitude card to someone we are grateful for."*
	Dealing with conflict	*"We learned about how to deal with conflicts, mostly with friends because we in our age group, we are in puberty and a lot of us get emotional about it so there's usually a lot of arguments."*
	Learned about emotions	*"We learned how to control our own anger and how to deal with problems, and problem-solve."* *"how to control our emotions like anger and how it affects people around you, and work as a team"*
	Safe use of social media	*"I think it helped me because in these times, most of us go on social media and a lot of us don't really care about how dangerous it is to share about your life"*
Activities students liked	Find a seashell activity—learned about giving good feedback	*"We learned that if we were telling someone that they did wrong we shouldn't be like 'you did this wrong, you did that wrong', you should be like 'I like how you did something, something, but you can improve by doing this, or that"*
	Gratitude letter	*"It was really nice because we got a chance to thank someone who did a lot of things in our lives such as our parents, because our school fee is really expensive so they definitely work a lot and usually finding a good job is hard here because the living expenses are really expensive and they're working really hard, not just to take care of themselves but to take care of us and that's a really big responsibility."* *"For the gratitude letter, I wrote it for my mom, and put it in my mailbox and she saw it and she was very happy about what I wrote about it and I learned that if you give someone your gratitude—if you say thank you to someone, that person will be very happy and grateful."* *"I wrote to my mom and I feel really good about it because you can express yourself about it and how you feel about all the work and things she did"*

(continued)

Table 13.2 (continued)

Themes	Subthemes	Sample responses
	Digital storytelling	*"That was really fun"* *"We made it together of a person dancing and singing and in the end shouting. It's like a really easy to use platform for animations. We just said we loved this group and then started dancing."* *"Fun way to express feelings to each other and show what we want to say through animation"*
	Poster/PowerPoint culminating activity	*"Story writing because you get to you use your own experience and use markers in the jar. You get to write the story of something you are grateful for and make story illustrations."*
Aspects students did not like	Unclear expectations	*"I don't know if it's the school's fault or it's just my parents' fault but my parents said that there was part for supporting homework, that's why my parents signed me up for it but we just talked about friendships,* etc. *I enjoyed it quite a lot."* *"Maybe the groups can be more…They can tell you what they are focusing on and stuff. They tell you they want you to do this but they don't tell you why they want you to do this."*
	Disruptive classmates	*"The counselor tells us we can do anything but then when we are all very noisy and talking and doing anything we want, maybe there should be a bit of restriction"* *"If I could add something, there was one guy in my group but basically he was a little rough, and he always goes off topic and he always cut into when other people say something."* *"Same thing happened to me, two boys were talking about gaming and it was dragging the conversation so maybe the school could take these people out and make a new group so we could have the same personalities so we can talk about it."*
Recommendations for future sessions		• Make it like a lunch cast, have a bigger group • More games • Make it longer, more than 6 sessions • Have more opportunities to talk to each other • More activities that draw on their personal experiences

grateful for, and to be mindful of others. The students also claimed that the program helped them learn about dealing with conflict, specifically with their friends, and acknowledged that since they are in puberty, a lot of them can get emotional and get involved in arguments. There were also students who reported that the program helped them learn more about emotions, and how to control negative emotions, such as anger. They also became more aware about how these emotions affect people around them, and how they work as a team.

Activities the Students Liked

The students reported that they liked the gratitude activities embedded in the program.

Among the activities most well-liked by the students are the digital storytelling, finding the seashell activity, gratitude letter, and poster/PowerPoint culminating activity. The students generally liked the creative activities that involved drawing and producing digital stories, since these activities give them an opportunity to express their feelings and draw on their own experiences. They thought that these activities provided them with a fun way to express their feelings for each other, and were very useful and enlightening. The gratitude letter activity, specifically, helped students express their gratitude to the people in their lives, such as their parents.

Aspects of the Program the Students Disliked

Although the program was generally well-received by the students, they also mentioned some aspects of the program that they did not like. Some mentioned that they felt their parents had unclear expectations about the program, and thought that the program was aimed at providing assistance in accomplishing homework and school requirements. However, the topics covered in the program were generally non-academic in nature. It also felt that the purpose for doing certain activities were not fully explained. Moreover, some students reported that one of the challenges in the program was their classmates' disruptive behaviors, such as being noisy, talking about unrelated topics, and interrupting classmates who were sharing.

Recommendations for Future Sessions

The students mentioned a few recommendations for future sessions. They said that having a bigger group and with more than six sessions would be best. They also suggested to include more games and more opportunities to talk to each other, as well as more activities that drown on their personal experiences. Overall, the program made the students reflect on aspects of their life that they should be grateful for, allowed them to meet and form new friendships with other students outside of their class, connect with the school counselors, and express their gratitude with others.

The program provided a relaxing and comfortable environment for the students to reflect and share their personal experiences.

Feedback and Insights Gained from the Counselors

Two out of the three counselors who facilitated the program were interviewed. They were asked regarding their impression of the program and the students reception of it. They also provided recommendations on how the program can be improved. The counselors responses were content analyzed and categorized into themes. Table 13.3 shows some of the themes from the counselors' interview.

General Feedback

Generally, the school counselors had a positive impression about the program. They though that the program allowed the students to have fun and enjoy, and at the same, reflect on their gratitude experiences. They noticed that the students were happy to attend the program and share their experiences, as well as to learn.

Program Effectiveness

The counselors reported that the program was somehow effective in attaining its goals (i.e., providing students with cognitive, affective, and behavioral skills to help them with their academics, and at the same, enhancing their well-being through gratitude). They thought that the students benefited from it.

Students' Reception

The students generally enjoyed participating in the program. They were able to learn a lot and apply these things in real life situations. The counselors noticed that the program helped the students develop a more positive perspective. Moreover, the program provided an opportunity for the students to have a sense of togetherness with each other. A ripple effect of positivity was also observed as some of the students helped and convinced others to pay more attention to the positive things in life.

Activities the Students Liked the Most/least

It was observed that the activities students liked and enjoyed the most are the ones that involve movement and interaction. In particular, the students were most responsive and engaged in activities such as the gratitude letter, reframing, digital storytelling,

Table 13.3 Counselors' feedback about the program

Themes	Subthemes	Sample responses
General impression about the program	The program was fun and enjoyable, and helped students reflect on their gratitude experiences	*"We had so much fun in the gratitude group and that was a much more personal experience…"* *"But for the students' who come, usually they are happy. They were happy to share, happy to learn…."* *"Especially for the students in the gratitude group, if they are treating the activities seriously, they are actually really doing something good for others or good for themselves."* *"They quite enjoyed… they really enjoyed the digital storytelling part."*
Effectiveness of the program	The program was somewhat effective in attaining its goals	*"…I think everyone got something from it… I mean, I don't quantify effectiveness but seems like they got something out of it…" "I think it's kind of effective…"*
Students' response to the program	Students enjoyed it	*"students enjoyed it"* *"I know that my gratitude group seems to go much better… we seemed to have more positive and enjoyed more in the Friday group."*
	Students found it applicable in their lives	*"…the students were reframing the difficult things in their lives. They understood it and they were trying to apply it as much as they could."*
	Students developed a sense of togetherness and more positive outlook	*"For the kids who actually loved the program, they liked the sense of togetherness… They are starting a new paradigm or thinking… or facilitating others or convincing others to take the positive signs of life."*

(continued)

Table 13.3 (continued)

Themes	Subthemes	Sample responses
Activities students liked the most/least	Activities students liked: gratitude letter; reframing; digital storytelling; finding a seashell—activities that involve movement and interaction	*"…we wrote a letter to someone, we did reframing, and then at the end, they did like the gratitude storybook or storytelling. I think they did really enjoy that one because they could… it's more open-ended and they could express what they want, what they think grateful for, and the way they could use paper and compute program. So it seemed they enjoyed that one a lot."* *"And I also think the one when they had to draw statements like something they would smile and make you happy."* *"The digital storytelling… I find the kids actually love more interactive activity." "We played an activity called 'finding a seashell'… So that give me a sense that they are really engaging it… they try their best to look for seashell"* *"I feel like they really love to move. They really love more interaction. They want other people to… they want something to do together instead of individual works."*
	Activities students did not like: passive activities like worksheets	*"…one thing they don't like… just doing things by themselves like working on a worksheet or some things like that."*
Strengths of the program	It helped students become more grateful and increased their well-being	*"I think it just helped them feel more positive and optimistic and more grateful in their life, and that, in general, should be good for well-being."*
	It helped students learn from their peers	*"They try to use the group dynamics as a peers learning platform…"*

(continued)

Table 13.3 (continued)

Themes	Subthemes	Sample responses
Challenges encountered	Parents signed up for the students	*"Their parents sign them up… some students didn't want to be there but they didn't have no other choice, they parents sign them up and let them go."*
	Lack of time and structure	*"And also one thing I think is that students there do not get a lot of free time or break time, and they are worried over schedule." "They always forgot to come."*
Points for improvement	Integrate the program into a class	*"maybe it could be integrated into a class…"*
	Improve the timeframe/schedule/structure of the program	*"We try to get the activity with a reasonable timeframe in a situation we are working with."* *"I think is an optimal number, 6 to 7. Ten could be a bit too big."* *"The other thing is the length. I think 40 min is okay but we should have more sessions, like 5 would be quite a limited number."*
	Implement the program for the whole grade	*"If it can be applied to the whole grade, that would be great!"*

and finding a seashell. They seemed to enjoy these activities because it provided them an opportunity for self- expression, creativity, and to interact with each other. On the other hand, the least liked activities by the students were the passive ones, such as completing the worksheets.

Strengths of the Program

One of the strengths of the program noted by the counselors was that it helped students become more grateful, which increased their well-being. Indeed, by incorporating some gratitude activities in the ASSB, it did not only become useful for helping students develop skills to help them deal with the academic demands of school but also facilitated the enhancement of their well-being. Another strength is that the program helped students to learn from their peers. The interactive format of the program allowed the students to share their experiences and to work with their peers on the activities, which provided them an opportunity to learn from each other.

Challenges Encountered

Although program implementation generally went well, there were some challenges encountered. For instance, it was observed that some of the students were not as engaged in the program or as willing to participate in the activities because it was their parents who signed them up. Another challenge was, because the program was scheduled during the lunchbreak, which was supposed to be the students' free time, there seemed to be not enough time for the program. Also, because of the lack of structure and regular schedule of the program, there were some students who forgot to attend the sessions.

Points for Improvement

The counselors suggested that the program can be improved by integrating it into a formal class. This could be helpful in providing structure and a regular schedule to the program, which could minimize student attrition or missed sessions. It could also make the students feel less "forced" to attend the sessions compared to when their parents signed them up. By improving the timeframe/schedule/structure of the program, more activities and sessions can be accommodated. Moreover, noticing the positive effects of the program, the counselors suggested that is can be applied to all the students in the grade level so that more students could benefit from it.

Recommendations for an Improved Program

The pilot implementation of the integrated program allowed us to get feedback and insights from the students and teachers, as well as to reflect on the program's strengths and points for improvement. The following are some recommendations for the development of an improved program.

Although the pilot implementation was relatively successful and positive feedback and experiences were reported by the students and counselors alike, there were some issues that were encountered. Some of these are the lack of time (too short and too few sessions) and high dropout/attrition rate of the participants. The sessions were conducted during students' lunchtime, which is supposed to be their free time. This can be resolved by integrating the program into regular classes (e.g., in Personal, Social, and Humanities Education (PSHE) classes or in guidance curriculum). This would allow the program more time and more sessions as the program can be conducted throughout the regular school term. This would also give the program a regular schedule so the students do not have rush into attending the sessions or forget the schedule. Moreover, embedding the program into regular classes would allow more students to benefit from it. It is suggested that the program be implemented in the entire grade level. As the school where the pilot was conducted has "vertical homerooms" that involve multi-grade classes, it can also be considered to implement it in such classes as this would allow peer mentoring across age groups.

In addition, it is ideal to involve administrators (e.g., program or guidance heads) and teachers for a more effective implementation of the program. The program can be delivered using a co-teaching model involving both teachers and counselors. The support from counselors would allow the teachers to be able to teach the program with minimal training. Likewise, parental involvement could help the program be more effective. Parents can be involved, for example, through activities such as the students talking to their parents about their goals and progress. Aside from the home-school continuity in the students' learning, it could also improve program buy-in by the students and their parents.

These suggestions point to the adaptation of the whole-school approach in the implementation of positive education. Indeed, there is evidence that promoting collaborative and collective action across the school system could lead to a successful implementation of positive education (e.g., Hoare et al., 2017; Zhang, 2016). One of the models that can be adapted is the "Learn it, Live it, Teach it, Embed it" (Hoare et al., 2017), which involves sharing the science of well-being to the whole-school community; applying evidence-based well-being practices in everyday life through one's own unique ways; providing students with their own time to discover and explore well-being; and adopting long-term, school-wide policies and practices that support the development of well-being within the school community (Hoare et al., 2017). This might be a long shot but embedding well-being in academic courses, such as in the integrated program of gratitude intervention and ASSB, could be a good start.

The program content could be improved by including more collaborative activities, which the students reported they liked more, and less of the passive ones (e.g., worksheet activities).

The activities could be made more relevant by relating it to students' day-to-day lives. The inclusion of reflection activities would allow the students to reflect on what they are learning and apply it in their everyday lives. Clearer goals for the program should also be set and it has to be made sure that these goals are clearly communicated to the students. Students can also be encouraged to come up with their own personal goals and targets, which they can use as part of an ongoing reflection. Online resources that the students can access through their computers or tablets can also be included to increase student engagement and to make it easier to access the resources and track student progress.

Lastly, the program can be improved by adding an assessment component. Ongoing formative assessment for the students would be helpful for them in tracking their learning and progress. Peer assessment can also be developed. Especially in the context of cross-age groups, this could be very effective in helping students engage in the program and reflect on their progress. Program effectiveness can also be assessed by developing an online instrument that can quickly and regularly be administered to the program stakeholders.

Conclusion and Future Directions

This chapter describes the development and pilot implementation of a program that integrates a gratitude intervention, which aims to improve student well-being, with ASSB, which aims to develop students' academic skills—in line with the goals of positive education. While the pilot implementation was relatively successful based on positive feedback from students and counselors, a number of suggestions for program improvement were noted, mostly pointing to the whole-school approach in implementing positive education, making the program content more relevant in students' daily lives, and adding an assessment component to the program.

The development of the improved program would allow for a better and wider implementation and could open avenues for future research. Program implementation could be standardized to allow for a better assessment of its effectiveness. Future research could also increase the sample size of the participants and include more classes. Whereas only qualitative interviews and observations were used in the assessment of the pilot implementation, other research methods, such as mixed qualitative-quantitative methods, or experimental methods can be designed in future studies to determine the program effectiveness and its influence on students' gratitude, well-being, and academic performance.

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Chapter 14
Instilling Growth Mindset and Grit in Hong Kong Chinese Community College Students: A Randomized Controlled Intervention Study

Wincy Wing Sze Lee and Ricci Wai-tsz Fong

Abstract Students' beliefs of whether intelligence is innate (fixed mindset) or changeable (growth mindset) vastly influence their learning behavior and willingness to persist in face of academic setbacks. Much research effort has been devoted to examining growth mindset interventions in Western countries, but relatively little is known about the impact of mindset interventions on students in the Chinese cultural context where beliefs regarding effort have already been an ingrained part of one's cultural heritage. The present study examined the effectiveness of a growth mindset intervention on changing students' mindsets, and also grit, and behavioural tendency as secondary constructs. A sample of community college students (n = 49) in Hong Kong participated in the study where they were randomly assigned to control or experimental group. Intervention materials used in the experimental group involved a text that introduces the concept of growth mindset, followed by writing tasks to deepen understanding. Instruments measuring mindset, grit and behavioral tendency for remedial actions were used before and after the intervention to track changes. Furthermore, students' self-perception of academic failure and their actual academic performance were used as covariates in the analysis. Repeated measure MANCOVA (2 groups $\times$ 2 time points) for growth and fixed mindset, when self-perception of academic failure was controlled, showed significant interaction effect; in particular, the significant interaction effect on mindset was attributed to a greater degree of decrease of growth mindset in control group when compared to their experimental counterparts; whereas no other significant interaction effects was found in other dependent measures even when covariates were controlled. Results yielded both theoretical and educational implications on the design of 'growth mindset interventions for specific group of students in the Chinese cultural context. Many practitioners may dismiss the effectiveness of 'small dosage' of persuasive notes to change students'

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mindset in classroom contexts. However, the results of the present study suggests that even a brief message with clear personal relevance would yield buffering effect on students specifically to those who have had major academic setbacks.

Practitioner Points

- When resources are limited, prioritize working with students who are disadvantaged or had just encountered academic setbacks, for the intervention materials strike the greatest psychological relevance to them.
- Design a contextualized and persuasive cover story to engage students and hence increase the likelihood of intervention success.
- There can be dual pathways to instill growth mindset: Boosting growth mindset or suppressing fixed mindset. Doing both is ideal to create better impact.

For decades, researchers have attempted to investigate the keys to enhancing human performance. One of the key psychological predictors of individuals' performance in a given task is whether they perceive their ability or intelligence as changeable ones (Dweck, 2006). If people believe that their competence can be changed – which is now known as 'growth mindset'– it is more likely that they will invest more effort, persevere through setbacks and strive for a goal over a long period of time (e.g., Burnette et al., 2013).

In the school context, while previous studies conducted in Western settings have examined various strategies to change students' beliefs related to intelligence, which are pertinent to their academic performance (e.g., Blackwell et al., 2007), relatively little is known as to how students' beliefs about intelligence can be altered to facilitate learning processes and outcomes in non-Western contexts. Specifically, we question whether there is still room in Chinese culture, where enhancing one's ability through greater effort has already been embraced by the Confucian cultural heritage (Kember & Watkins, 2010), to further cultivate growth mindset in students. The findings may offer important insights for designing effective interventions and practices that can empower low-achieving students to develop resilience against setbacks, persist in their educational endeavours, and flourish in the long run. Hence, this chapter aimed to examine the effectiveness of a short intervention on Hong Kong community college students' growth mindset using a randomized controlled design.

Persevering in Setbacks: Growth Mindset and Grit

Research in motivation has developed a highly sophisticated nomenclature in understanding learning behaviors and outcomes (Pintrich & DeGroot, 1990). Implicit theory of intelligence suggests that one's implicit theories about intelligence create 'meaning systems' that explain affects, behaviors and cognitions coherently (Dweck & Leggett, 1988). Specifically, it is defined as the implicit assumptions

people hold regarding intelligence, whether it is fixed or changeable. It was found that people who endorse a view that intelligence is malleable will be more likely to subscribe to learning-oriented goals, make effort attributions and take remedial actions than those who endorse a view that intelligence is fixed (Hong et al., 1999). The effect of these two contrasting 'meaning systems' is even more salient when people are posed with problems and challenges, such that an incremental view empowers one to interpret challenges as opportunities to learn and improve, resulting in higher persistence in solving difficult problems; whereas a fixed view leads to an interpretation of challenges being threats to ones' ego and therefore resulting in a higher likelihood of inaction or giving up (Yeager et al., 2014). These two contrasting meaning systems are now denoted as 'growth mindset' and 'fixed mindset', respectively. Extant research indicated that endorsing a growth mindset in various domains is associated with endorsement of mastery and performance-approach goals (Chen & Wong, 2015), psychological well-being and school engagement (Zeng et al., 2016), more rights-based (vs. duty-based) moral values (Chiu et al., 1997), lower level of helplessness in learning (Wang & Ng, 2012), and higher academic achievement (e.g., Chen & Wong, 2015; Yeager et al., 2019).

Latest research effort has also examined the role of related psychological and well-being constructs on students' motivational and academic outcomes. Of which, grit (i.e. the enduring perseverance and passion over a long-term goal) is receiving burgeoning research interest in education, psychological, neurological and clinical disciplines (Duckworth & Quinn, 2009; Duckworth et al., 2007). Specifically, grit is generally defined by two dimensions, namely, consistency of interest and perseverance of effort. Consistency of interest refers to a tendency to advocate the same set of interests overtime, whereas perseverance of effort refers to the extent to which individuals could sustain their enduring effort despite hardship and challenges over a long period of time. Although grit was found to have a strong correlation with Big Five conscientious in some studies (e.g., Credé et al., 2017) and was sometimes regarded as a dimension of conscientiousness, other researchers (e.g., Duckworth & Eskreis-Winkler, 2013; MacCann et al., 2009) have remarked that they are distinct from each other. While grit is highly related to Big Five conscientiousness in that both constructs pertain to individuals' persistent pursuit of goals, grit points to long-term stamina in pursuing the same interests whereas conscientiousness points to the intensity of effort. Conscientious students do not necessarily have the stamina that is enduring enough for them to pursue their academic goals over a very long period of difficult time.

This growing body of research has indicated positive links of grit with various academic-related constructs, such as academic achievement and academic motivation; as well as with well-being constructs, such as life satisfaction and positive test-related emotions (e.g., Datu & Fong, 2018). With the benefits that grit can potentially bring to students' achievement and well-being, recent studies are beginning to look into the correlates of grit and several have suggested that growth mindset may drive individuals to endure hardship and rise to challenges towards a goal with a positive and moderate relationship between growth mindset and grit (Tucker-Drob et al., 2016; West et al., 2016).

More recently, in a study that performed structural magnetic resonance imaging (S-MRI) on healthy Chinese high school students, Wang and colleagues (2018) found that growth mindset plays a notable role in the development of grit. They revealed that growth mindset was not only moderately and positively correlated with grit, but it also explained for additional variance in grit even after controlling for the effects of self-control, delayed gratification, intelligence and total gray matter volume (GMV), which pertains to self-regulation and motivation. Moreover, growth mindset was found to mediate the negative relationship between the regional GMV (rGMV) in the left dorsolateral prefrontal cortex, which indicates poor self-regulation, and grit. The findings suggest that it may be possible to improve students' grit by augmenting growth mindset through interventions. Further investigation is, however, warranted to verify the effects of growth mindset on grit and students' learning-related behavioral change. The present research employed randomized controlled trial to examine the impact of intervention on growth mindset and also grit among a group of students who had just encountered a major academic setback.

Instilling Growth Mindset in Chinese Cultural Context

Given the powerfulness of growth mindset in steering people's motivation in learning context as well as in general well-being in life, advancement has been made to foster growth mindset from small scale school-based to national-level program in the States (Blackwell et al., 2007; Yeager et al., 2014, 2019). The intervention materials normally cover and explain the concept of brain plasticity through a metaphor of the brain being similar to a muscle that possesses the potential for change and can become stronger with training. This is often accompanied by stories of how reputable figures or counterparts of the participants have succeeded in various ways with the use of growth mindset, as well as a "saying-is-believing" writing task that enables participants to internalize the idea that ability can be developed (Aronson et al., 2002; Yeager & Dweck, 2020). In short, the intervention is underpinned by socio-psychological perspective which suggests that one's belief about intelligence can be changed through a socio-psychological mechanism. In terms of operation, the initial face-to-face intervention consisted of eight one-hour sessions, where reading, discussion and writing tasks are involved in the process alongside the tutor's lecturing on key themes. In a randomized controlled trial study, the intervention program was shown to be effective by increasing experimental group participants' GPA and decreasing their dropout rate in core courses (Blackwell et al., 2007; Yeager & Dweck, 2012). Given its initial success, effort has been made to scale up the intervention with shorter duration and larger national sample through online dissemination that is directly administered to students without tutors' input (Yeager et al., 2016; Yeager & Dweck, 2020). These intervention studies, again, yielded similarly positive, stable and sustainable change (Yeager et al., 2014, 2019).

Investigation to understanding growth mindset in Chinese cultural context have been very limited despite the proliferation of empirical effort in Western settings.

Over the years, researchers have looked into the relationships of implicit theories with various learning- and cultural-related correlates, such as goal orientations (e.g., Chen & Wong, 2015), school engagement (e.g., Zeng et al., 2016), approach to schoolwork (e.g., Wang & Ng, 2012), grit (e.g., Wang et al., 2018; Zhao et al., 2018), perfectionistic tendencies (e.g., Chan, 2012), challenge-seeking behavior (Rege et al., 2020), and academic achievement (Chen & Wong, 2015). In particular, in addition to the established positive link between growth mindset and academic achievement in Western studies (e.g., Dweck, 2000; Dweck & Leggett, 1988), Chen and Wong (2015) revealed that performance-approach goal mediated the link between growth mindset and academic achievement among Chinese students, and performance-approach goals was positively associated with academic achievement as opposed to the negative link found in previous studies using Western samples. Positive associations were also found among mastery, performance-approach, and performance-avoidance goals. The findings were interpreted with reference to the cultural emphasis on education and achievement in Chinese communities in which students are generally socialized to be pragmatic with their learning in order to cope with multiple academic-related goals simultaneously – the yearning for mastery of knowledge, the desire to demonstrate their competence to their significant others (e.g. family), and the need to avoid failure.

While belief in effort is pivotal to their academic achievement, such belief is also propelled by students' need to perform to others. On the other hand, Zeng et al. (2016) found that growth mindset can increase Chinese students' school engagement by enhancing their resilience. Likewise, Wang and Ng (2012) suggested that the more Chinese students believe that their academic performance can be changed, the less passive and helpless they will be towards their schoolwork. Together, these studies imply that while Chinese students who struggle academically may withdraw themselves from learning activities to avoid further failures and negative social appraisals, it may be possible to encourage them to take proactive remedial actions with enhanced resilience by prompting these students to believe that their academic struggles can be overcome with increased effort. Investigations of growth mindset with a specific focus on academically struggling students will be meaningful as an attempt to enhance their learning outcomes and achievement in the long run.

Too often these studies in the Chinese context are limited to correlational studies, and to our knowledge, intervention studies conducted with Chinese students were even scarcer in the past decade. As a result, it is uncertain whether findings from the West can be translated into meaningful application among Chinese students. One possible challenge of administering growth mindset interventions in the Chinese context may be attributed to the predominant beliefs of effort in Confucian cultural heritage that may complicate the effects of growth mindset interventions (e.g., Fwu et al., 2016; Kember & Watkins, 2010; Lee, 1996). For instance, Fwu and colleagues (2016) suggested that while Chinese students generally regard efforts as a key to success, they would be trapped in a dilemma of either experiencing emotional distress for putting in too much effort after an academic failure or perceiving a negative self for not putting in enough effort after an academic failure. Findings as such might

put to question the need for cultivating growth mindset in Chinese students since the problem may not lie in the ignorance towards the concept of growth mindset.

Nevertheless, in addition to the aforementioned psychoneurological and longitudinal studies (e.g., Wang et al., 2018; Zhao et al., 2018) which offered reliable evidence to support a link between growth mindset and grit among Chinese students, Park and colleagues (2020) took a step further and found that growth mindset and grit hold a consistent and mutually reinforcing relationship over at least two academic years regardless of students' gender, ethnicity and socioeconomic status. Given the importance of growth mindset and grit to students' learning and life-long flourishing, it will be meaningful to investigate whether growth mindset can be cultivated via a brief intervention as found in the West, and whether the growth mindset intervention has an impact on grit, behavioral tendency and perceived academic performance. As Yeager and Dweck (2020) noted that an effective intervention should not only be able to change individuals' mindset beliefs, but also their short-term mindset-related behavior, e.g., challenge-seeking, we included students' behavioral tendency as an outcome variable in this study.

It is hoped that this study can offer new insights or possible directions for future researchers and school teachers to design brief intervention procedures in classroom and co-curricular activity contexts to promote students' growth mindset and grit, and their capacity to flourish.

Objectives of the Present Study

The present study aims to examine the effectiveness of a brief mindset intervention in changing growth mindset, grit, and behavioral tendency to strive for improvement among a sample of Hong Kong Chinese community college students. The study employed randomized controlled trial repeated measure design to address the following research questions:

(1) Will the experimental group yield greater change in growth mindset than that of the control group?
(2) Will the experimental group yield greater change in grit than that of the control group?
(3) Will the experimental group yield greater behavioral tendency to improve their study skills than that of the control group?

The above three questions will be tested also by controlling students' actual academic performance and self-perceived academic performance.

Method

Context of Research

Previous studies showed that disadvantaged groups benefited most from growth mindset intervention (Yeager et al., 2016). The present study took place in a community college, where in Hong Kong, only students who have not qualified for a university place will enrol in community colleges. Statistics of 2019 show a total of 54,642 sat in the public examination (Diploma of Secondary Examination) and 15,000 of them secured a place in University; whereas with another 4500 of them could only meet entry requirement but are not sufficiently competitive for entry, as a result, ended up studying in associate degree (South China Morning Post, 2019). Associate degree students' experience may therefore give greater relevance and propensity for change in mindset given the academic setback they had just encountered (Yeager et al., 2019). The participating community college is one of the leading institutes in Hong Kong according to the number of students admitted. It provides a wide arrays of associate degree programs, hence giving good representativeness of the sample for this study.

Participants and Procedures

Sixty-seven community college freshmen from a community college in Hong Kong participated in the study voluntarily during an orientation workshop organized by the Student Affairs Office. Their ages ranged from 18 to 21 and their gender were not recorded in the present study. Students were briefed by the first author about the purpose of the study (with a mild deceptive cover story of understanding college transition), as well as their right as participants as approved by the research ethics committee. The first author administered the two packets of materials (control and experimental) randomly to the group of students, monitored their progress and ensured that participants completed the task individually without communicating with their peers. Participants first signed the consent and took approximately 40 min to complete the entire packet of materials. Participants were then debriefed and thanked.

Instruments

Mindset. A 4-item version of mindset scale was used (Dweck, 2006). The scale measures two types of mindset, fixed mindset (2 items; e.g., 'You have a certain amount of intelligence and you really can't do much to change it.') and growth mindset (2 items; e.g., 'You can always substantially change how intelligent you

are.'). Despite the small number of items for each dimension, previous studies have demonstrated good reliability and validity of the scale.

Grit. A 12-item Grit scale was used (Duckworth et al., 2007). The scale measures two dimensions, *consistency of interests* which pertains to individuals' ability to sustain their passion over the same goal overtime (6 items; sample item (reverse): 'I often set a goal but later choose to pursue a different one'); and *perseverance of effort* which pertains to individual's tendency to endure hardship and sustain their effort in times of setbacks or failure (6 items; sample item: 'Setbacks don't discourage me').

Behavioral tendency measurement. Four items were used to measure students' behavioral tendency to improve their study skills after a major academic setbacks. The items were created specifically to measure students' tendency to invest effort to improve their academic ability (Dweck, 2006). Sample items were 'If University X provides free study skills information in the future, do you want to receive it?' and 'Do you consider yourself still have room for improvement in terms of your academic ability?'.

Perceived academic failure. A single item asking 'Do you consider your Diploma of Secondary Education (public examination) performance as a failure?' The information was used as a covariate for analysis.

All the above instruments used a 5-point Likert scale to measure participants' endorsement with each item, with '1' to represent "strongly disagree' and '5' to represent 'strongly agree'. The higher the score participants obtained in a dimension or scale signifies a stronger endorsement in that dimension or scale.

Prior academic performance. Participants were asked to provide their Hong Kong Diploma of Secondary Education (DSE) public examination scores. It is a composite score derived from the best five subject performances. The highest score (transposed from grade) possible for a subject was 7, and the lowest possible score was 0. The minimum requirement for admission into a community college was 10, while the minimum requirement for admission to university was 19. The range of scores between associate degree and university admission gave the possible variances for analysis in this study.

Intervention Materials

The intervention materials in the experimental condition were adapted from Blackwell et al. (2007) and Panuseku et al. (2015) experiments. The adaption was guided closely by the socio-psychological principles (Walton, 2014). The intervention material involves the reading of a short passage written by the first author. It pertains to the introduction of growth mindset, the scientific findings supporting the notion of brain plasticity through repeated effortful training, and finally, the conclusion that intelligence can be improved through persistent effort.

The passage used in the present study was written in Chinese, consisting of 580 words printed on a single page. It was back translated to English by a graduate student to ensure validity. After presenting the passage, three small writing tasks were used

to foster self-relevance and deep processing of the intervention passage (Bower & Gilliagan, 1979; Hulleman & Harackiewicz, 2009). Specifically, participants were asked to: (1) summarize two key points form the passage; (2) raise one issue or question to follow up and; (3) generate one personal experience that can support what was mentioned in the article. In the cover story, participants were told that these information they provided would be used in future workshops for advising future freshmen in orientation programs. In the control condition, the entire procedure remained exactly the same except that an article of similar length (578 words) describing college study skills (such as time-management and the need to adapt to different modes of learning in lectures and tutorials) was used.

Data Analysis

Prior to analyses, manipulation check were conducted using the open-ended responses provided by participants in the three writing tasks to ensure that they have processed the intervention passage beyond simple comprehension, and have generated psychological resonance and relevance. Specifically, their responses in those three tasks were coded 'deep' or 'superficial'. Any participants who had all three responses coded as superficial were discarded from subsequent analyses. Nineteen cases (16.5%) were discarded with reference to this criteria.

Descriptive statistics and reliabilities of the fixed and growth mindset at both time points, interest and perseverance at both time points, DSE scores, perceived failure and behavioral tendency measures are shown in Table 14.1. Since the study is a within (time) x between (intervention) design, repeated measure MANCOVA was used to test the function of intervention effect and experimental effect on mindset and grit, respectively with perceived failure of prior performance and self-reported prior academic performance as covariates to control the influence of psychological interpretation of academic failure and academic performance, respectively.

Results

Results of MANCOVA showed a significant interaction effect between control and experimental group on growth and fixed mindset only when perceived academic failure was controlled [F (2, 45) = 3.317, $p < 0.05$]; but not when academic performance was controlled [F (2,45) = 1.718, $p = 0.192$] (See Table 14.2). Results of MANCOVA showed that there was no significant interaction effect between control and experimental group on Interest and Perseverance when covariates of perceived failure and academic performance were controlled. Results of ANCOVA did not show any significant intervention effects on behavioral tendency (Table 14.3).

Table 14.1 Descriptive statistics of community college students' growth mindset, fixed mindset, interest, perseverance at two time points, DSE score, perceived failures and their behaviour tendency upon taking the intervention

	Intervention (n = 25)		Control (n = 24)		Total (N = 49)		
	M	SD	M	SD	M	SD	Cronbach's alpha
Fixed mindset (Pre)	3.04	0.95	2.52	0.91	2.79	0.96	0.795
Growth mindset (Pre)	3.66	0.61	3.98	0.77	3.82	0.70	0.585
Interest (Pre)	2.62	0.81	2.93	0.73	2.77	0.78	0.806
Perseverance (Pre)	3.64	0.49	3.42	0.79	3.53	0.66	0.802
Fixed mindset (Post)	2.94	0.92	2.48	1.02	2.72	0.98	0.841
Growth mindset (Post)	3.70	0.80	3.59	0.70	3.65	0.75	0.582
Interest (Post)	2.55	0.69	2.89	0.59	2.71	0.66	0.773
Perseverance (Post)	3.73	0.50	3.49	0.72	3.61	0.62	0.813
DSE score	17.43	2.95	17.22	2.78	17.33	2.84	–
Perceived failure	2.83	1.13	3.29	1.37	3.06	1.26	–
Behavioural tendency	3.66	0.64	3.59	0.70	3.63	0.66	0.727

Table 14.2 Repeated measure MANCOVA table with intervention effect on growth and fixed mindset

	df	F	p	$\eta 2$
Between subject effects				
Intervention	2	0.23	0.06	0.08
Within subject effects				
Time (Pre and Post)	2	1.90	0.16	0.06
Interaction effect				
Time × Intervention	2	1.96	0.15	0.08
Error	45			
Time × Intervention * Perceived academic failure	2	3.32	0.05*	0.13
Error	43			
Time × Intervention * DSE score	2	1.72	0.19	0.08
Error	41			

Table 14.3 Repeated measure MANCOVA table of intervention effect on grit (Interest) and grit (Perseverance)

	df	F	*p*	$\eta 2$
Between subject effects				
Intervention	2	3.47	0.04*	0.13
Within subject effects				
Time (Pre and Post)	2	2.01	0.15	0.08
Interaction effect				
Time × Intervention	2	0.04	0.97	0.00
Error (from ANOVA)	45			
Time × Intervention * Perceived academic failure	2	0.13	0.88	0.01
Error	43			
Time × Intervention * DSE score	2	0.11	0.90	0.01
Error	41			

* $p < 0.05$

Discussion

The present study tested the effectiveness of a brief growth mindset intervention in a group of community college students in Hong Kong, using randomized control repeated measure design. It was hypothesized that the intervention would have a positive impact on students' change of growth mindset, grit, and behavioral tendency for remedial actions. Results showed that there was no significant interaction differences between the experimental and control groups in all these three dependent variables when possible covariates were not controlled. However, significant interaction effect was found between control and experimental group in growth and fixed mindset, when students' perceived academic failure was controlled. Counterintuitively, the significant interaction effect was attributed to a greater degree of decrease of growth mindset in the control group than that of their experimental counterparts; but not due to an increase in growth mindset in the experimental group as hypothesized. We will discuss the significance of the findings, both theoretically and methodologically, with reference to the existing literature.

First, empirical effort in applying mindset intervention and testing its effectiveness is relatively sparse in the Chinese cultural context. Specifically, we set out to question whether fostering growth mindset is feasible in a culture where effort and educatability has already been highly regarded (Lee, 1996). The results of the present study show that growth mindset seems to be inert to further change with the experimental group not showing much reaction to the intervention; and the interaction effect detected after accounting for the perception of academic failure was attributed to the significant drop of growth mindset in the control group. This is intriguing, as we replicate materials and procedures as those conducted in the West, yet, there

was no reported regression effect of growth mindset with the use of neutral materials in the control group, such as, teaching college study skills. It is plausible that students who had just encountered a prominent academic setback are highly vulnerable to any information that is suggestive of their (limited) intelligence or capacity to improve. Due to the limited time available for test and questionnaire administration, arranging in-depth interviews with participants was impossible. Future studies should look further into students' interpretation of the intervention (both experimental and control groups) materials with reference to their latest academic experience, as well as how they perceive the impact of the passage on them.

Second, differences between the experimental and control groups in the present study was found when a psychological variable – perception of academic failure – was controlled in the analysis. It suggests that in the present context, students with different psychological states (i.e. how they interpret their own failure) may lead to different understanding of, not only the intervention materials, but also the neutral materials in control group. Methodologically, this finding implies that the choice of covariates may also be key to yielding detectable interventional changes. It echoes with Yeager and colleagues' latest effort of the need to design highly contextualized interventional materials to foster growth mindset change instead of rely on a one-size-fits-all standardized form of intervention (Yeager et al., 2019). Further investigations, methodologically, should take into account students' psychological covariates when designing a contextualized interventional materials. Furthermore, the need of contextualizing materials applies beyond the design of interventional passage, but also on the requirements of the 'writing task' that is used to forge personal relevance. The quality of writing provided by participants in the writing task in the present study impacts on the analysis and therefore systematic manipulation check was included to eliminate unqualified data point. Yet, as mentioned above, the constraint of time does not provide space to administer in-depth interview with participants, for which will provide rich data on future, contextualized design to gain higher precision and hence effectiveness among this distinct group of students.

One of the biggest critiques of various socio-psychological interventions alike has been their brevity and presentation of materials in prose format, oft-considered as a cognitive task; and if effect is produced, it is merely a primacy effect or learning of new knowledge. Given that controlling a psychological covariate revealed the actual differences between groups, it is possible that the intervention was working at psychological level but not as a sheer cognitive task. The present findings may provide an indirect evidence to support the validity of socio-psychological intervention, specifically at psychological level. However, we are aware that our claim here is inferential, and more direct evidence is needed to address this major theoretical issue in the field.

On the other hand, although previous studies suggested a positive link between mindset and grit in correlational studies (e.g., Wang et al., 2018; Zhao et al., 2018), the non-significant results on grit in the present study may be because of a lack targeted materials on grit in the intervention design. It could be difficult to anticipate positive change with the use of a brief short-spanned intervention to produce indirect or secondary impact on grit (similar vein of logic for the non-significant results on

behavioral remedial action items). A related note of methodological nuance is that, future research may also consider the choice of grit measurement. In the present study, we chose to measure students' grit with a widely used instrument in the grit literature (Duckworth et al., 2007), but it should be noted that the instrument was developed among students from an individualistic context. The construct of grit may differ among students from collectivist cultures. For instance, in a qualitative study, Datu et al. (2018) suggested that in addition to their consistency of interest and perseverance of effort, students' adaptability to changing situations is also key to their success in pursuing long-term goals in collectivistic settings. With the emphasis on social harmony in collectivist settings, it is believed that being able to espouse "a context-sensitive self" and flexibly adjust oneself to meet changes of situational demands may be equally, if not more important than, advocating a consistent interest or goal to collectivist learners. Future researchers may consider measuring students' grit with a more cultural-sensitive picture of grit and verify the link between mindset and grit in collectivist settings.

Limitation

It is acknowledged that the present study has several limitations that need to be addressed with further efforts. First, this work attempted to test the effectiveness of mindset intervention with the most stringent experimental design, resulting in a relatively small sample size (due to difficult access to sample and administration difficulty), not to mention to eventual sample size upon discarding cases to ensure manipulation fidelity and data quality. It is hoped that this preliminary effort and results can provide evidence for funding opportunities of larger scale work. Another related issue is that, the lag between the repeated measures was too short, and one important issue discussed in the literature is the need to demonstrate sustainable effect by providing delayed measurement, or most ideally, a longitudinal tracking of students' academic performance alongside Likert scale self-reported measurement to offer a more holistic profile of effectiveness.

Conclusion

The present study applies a brief growth mindset intervention to foster growth mindset among a group of college students in Hong Kong using randomized control trial. There seems to be a ceiling effect for Chinese students to further advance in growth mindset given that the culture has already preached its importance and inculcated this value into Chinese students on various fronts. Nevertheless, while further investigations are certainly warranted, taking students' psychological aspects into account may be a potential tipping point to developing growth mindset among Chinese students or providing a buffering effect to develop a fixed mindset. Perfect is always the enemy

of good, as many practitioners may dismiss the effectiveness of 'small dosage' of persuasive notes to change students' mindset in classroom contexts. However, the results of the present study suggests a brief message with clear personal relevance of growth mindset would yield buffering effect on students specifically to those who have had major academic setbacks. This preliminary study can hopefully ignite research interest in developing and testing growth mindset interventions in Chinese communities.

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Chapter 15
Multi-Tiered Well-Being Interventions: Envisioning a Model for Prevention and Remediation

Stefanie Chye, Anuradha Dutt, and Yvonne Seng

Abstract Mental health issues are on the rise worldwide. Recent studies suggest that students may benefit from a preventative approach to mental health and well-being. Traditionally, mental health services have adopted a reactive approach, focusing on the diagnosis and treatment of pathology. Traditional approaches in the form of remedial mental health support have their place in service delivery. Increasingly, there is acknowledgement that mental health professionals need to support both the reduction of mental illness and the improvement of personal well-being. With new forms of evidence-based supports to improve well-being currently being generated from the field of positive psychology and positive education, traditional approaches to mental health could be further complemented and counterbalanced by a preventive approach from positive psychology and positive education. The present work brings together existing studies in a holistic model. Through the analysis of existing models, study of promising practices and incorporation of technology, the authors envision a model and propose a programme that can provide prevention and remediation support for mental health in schools. It is hoped that these proposals would contribute to evidence-informed school and classroom practices that promote overall student well-being.

Practitioner Points

- A two-tiered model for prevention and remediation is proposed that can be used to guide the development of mental health interventions. The first tier adopts a prevention approach, promoting well-being via an intervention that uses positive psychology and positive education strategies supported by mobile applications (apps). The mobile apps further enable the identification of students at risk for mental health issues. The second tier adopts a remediation approach, providing remote telehealth counseling to at-risk students.

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- An example of how the model can be operationalized is offered and is situated within the context of Singapore.
- The model can be used to provide support for mental health and well-being of students, increase mental health literacy, identify student facing the risk of developing mental health problems, and foster a more inclusive and empathetic environment towards mental health issues.

Mental health issues are on the rise worldwide. The burden of mental disorders continues to grow with major health and socio-economic consequences for countries around the world (WHO, 2018). Mental health among the youth, in particular, is a growing public concern observed in many developed nations, including Singapore. According to the World Health Organization, mental health conditions account for 16% of the global burden of disease and injury in adolescents (WHO, 2019). Although, there are no nation-wide epidemiological data on the prevalence of mental health concerns among students in Singapore, a few studies conducted suggest that mood- and anxiety-related conditions in students are some of the leading contributors to the healthcare burden within the nation (e.g., Chong et al., 2012; Subramaniam et al., 2020; Woo et al., 2004, 2007). For instance, prevalence rates of depression among adolescents aged 13–19 years from secondary schools and junior colleges in a small community-based population in Singapore was estimated to be between 2 and 2.5% (Woo et al., 2004). In the same vein, Singapore's Community Health Assessment Team (CHAT), a community mental health organisation, has observed a 36-fold increase in the number of youth referrals for mental health issues in the last decade (Channel News Asia, 2020a, 2020b). Based on numbers provided by the Samaritans of Singapore (SOS), total deaths caused by suicide across the entire nation's population between 2013 and 2016 ranged between 409 and 426. Although a slight decrease was observed in the total number of deaths caused by suicide in recent years, the number of successful suicides across youths aged 10–19 years and young adults aged 20–29 years have increased. Similar trends have been observed with anxiety-related mental health conditions among students in Singapore. Academic stress and test anxiety seems to be a common problem across students within the Singapore school system. Results from the Programme for International Student Assessment (PISA), as reported by the Organization of Economic Cooperation and Development (OECD, 2015), suggested that test anxiety levels across the 5825 participating Singaporean 15-year-old students were significantly higher than the OECD average of all participating countries. In Singapore, 76% of the participating students reported feeling very anxious for a test even if they were well-prepared, compared with the OECD average of 55%.

Many mental health conditions have their onset in childhood (Woo et al., 2007), with the possibility of sustained effects. For instance, Woo et al. (2007) conducted a community-based prevalence study involving 2139 school-going children aged 6–12 years. The prevalence of emotional and behavioural problems was found to be at 12.5%, which was comparable to studies in Western countries. Adolescents (i.e., 13–18 years) may also be at great risk of mental health concerns, given that they are in a stage of life in which they frequently face internal conflicts or situations

that can directly compromise their mental health. Furthermore, most mental health problems diagnosed in adulthood begin in adolescence (Knopf et al., 2008), with half of lifetime diagnosable mental health disorders beginning by age 14 (Kessler et al., 2005).

Researchers and practitioners recognize that early prevention and intervention during childhood and adolescence can improve personal well-being and help avoid adult mental health problems later in life. Therefore, proactive (or preventive) and reactive (or remedial) measures of mental health issues in adolescents is gaining widespread traction (Kieling et al., 2011). Proactive measures aim to build skills across all students within schools to enhance psychological well-being and prevent mental health concerns. Reactive measures are used in response to an emergency or to address mental health concerns as a form of intervention or remediation. As a case in point, Singapore is looking to place a greater emphasis on enhancing well-being (i.e., prevention) and remediating mental health (i.e., intervention) in its schools. During the past decade, mainstream schools in Singapore have employed the social-emotional learning (SEL) framework initiated by the Ministry of Education in 2005 (Social and Emotional Learning, MOE, n.d.) to promote an environment of well-being and healthy learning for students beyond academics (Chong et al., 2013). These school-wide programmes aim to encourage students to develop adaptive skills and strategies to manage common day-to-day challenges related to the negative effects of peer pressure, healthy means of emotional regulation, examination stress as well as fostering empathy and concern for others. Critical to the SEL framework is the development of five core socio-emotional and behavioral competencies among students (i.e., self-awareness, social awareness, self-management, relationship management, and responsible decision making). The SEL framework is infused within the school's general curriculum and can be found in subject areas pertaining to character, civic and moral education, sex education, life skills training, service learning, career guidance and co-curricular activities. Despite these preventive measures employed by schools, there has consistently been a proportion of students that experience more persistent mental health, behavioural and learning concerns. In these circumstances, reactive strategies are employed whereby "allied educators", comprising school counsellors and learning/behavioural support staff, help individual students with remediation. These individual intervention services aim to improve a student's interpersonal functioning, on-task engagement, stress reduction, conflict management skills, and literacy skills (Chong et al., 2013; Yeo & Choi, 2011).

Although a multi-tiered model of support for prevention and intervention of mental health concerns has helped to a certain extent, there could be a number of possible challenges faced by schools in preventing and remediating mental health problems among students. These could include increased academic expectations, the lack of self-help strategies to maintain psychological well-being among students, limited face time from teachers and counsellors to run schoolwide SEL programmes, low manpower to manage the increasing demands of students with mental health issues along with their other responsibilities, and few opportunities to learn skills on the part of the students to enhance well-being due to their packed academic schedules. Given these challenges and constraints faced by schools, more can be done in

terms of introducing positive psychology approaches towards mental health prevention and remediation, by harnessing digital technologies to further the impact on psychological well-being (Peters et al., 2018; Yaden et al., 2018).

Positive psychology approaches examine positive cognitive and emotional characteristics and processes that are important to foster. These characteristics serve as buffers that protect individuals from stressors and adversities and serve as personal assets that compensate individuals' deficits. The basic principles of positive psychology are well aligned with the fundamental aim of education to promote optimal human development and are well-suited for application in school settings (e.g., Clonan et al., 2004; Furlong et al., 2014; Huebner & Hills, 2011). Technology-aided instruction and interventions hold promise in terms of customization, personalisation and scalability, and are time and resource efficient. Additionally, the digital platforms could provide students with more self-directed opportunities to develop awareness and practice well-being skills via an engaging interface. Technological affordances enable teachers, counsellors, and support staff to address current challenges faced in the school system and to scale up the interventions.

The current chapter elaborates on how digital technologies adopting positive psychology principles can be used as a form of prevention and remediation within a programme following a multi-tiered model of mental health supports. The multi-tiered system of supports for proactive and reactive measures is increasingly used in the Singapore school system, which serves as a testbed for the feasibility of the ideas presented.

Envisioning a Model: Promoting Well-Being via a Combination of Positive Psychology and Traditional Mental Health Approaches

The World Health Organisation declares that health is "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 2005, p. 2). Mental health, in particular, is defined as "a state of well-being in which the individual realizes his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (WHO, 2005, p. 2). Mental health services have traditionally adopted a reactive approach and focused primarily on ameliorating and eliminating disease or infirmity. Emphasis is placed on diagnosis and treatment of pathology, remedying deficiencies and recovery from symptoms. For instance, three public hospitals (e.g., Institute of Mental Health, National University Health System, and KK Women's and Children's Hospital) in Singapore support a community-based multidisciplinary team of mental health professionals to work directly with school counsellors within the mainstream school system. Each team is called REACH, which stands for "Response, Early Intervention and Assessment in Community mental Health". By providing consultation services to schools and partnering with trained general practitioners (or

family doctors) and voluntary non-government organizations, children and teenagers with suspected mental health conditions could be assessed in their schools and homes if necessary. Hence, REACH teams are able to respond to a student's mental health concerns and help alleviate symptoms in an efficient manner (Lim et al., 2015).

Traditional approaches in the form of remedial mental health support have their place in service delivery, especially for targeted populations that need intense psychological services. However, the increasing acknowledgement that the absence of mental illness is not equivalent to a state of well-being (e.g., WHO, 2005), Slade (2010, p. 2) makes the case that "promoting well-being may need to become the norm rather than the exception for mental health professionals in the twenty-first century," and underscores the need for mental health professionals to support both the reduction of mental illness and the improvement of personal well-being at the same instance. With new forms of evidence-based supports to improve well-being currently being generated from the field of positive psychology, traditional approaches to mental health could be further complemented and counterbalanced by a preventive approach from positive psychology that could be employed within the schools.

Positive Psychology emphasizes well-being and focuses on the positive strengths and assets of the individual (Slade, 2010). As Seligman argues, the support and regeneration of existing strengths is an underused but one of the most effective weapons in the therapeutic arsenal (Seligman, 2005). Seligman and Csikszentmihalyi (2000, p. 5) define the field of positive psychology as follows:

> The field of positive psychology at the subjective level is about valued subjective experiences: well-being, contentment, and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present). At the individual level, it is about positive individual traits: the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent, and wisdom. At the group level, it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance and work ethic.

Incorporating preventive strategies to increase overall well-being and reduce mental health problems requires the adoption of a model that goes beyond the traditional "treat the illness" model, to one that simultaneously creates approaches that are well-being orientated and combines with remediation (Schotanus-Dijkstra et al., 2017). By integrating positive psychology interventions as a preventive approach to address mental health concerns in the school system, well-being can be promoted within the school's environment and curriculum. This integrated model of a "build-what's-strong" approach to therapy can usefully augment the traditional "fix-what's-wrong" approach (Duckworth et al., 2005). Digital technologies could be further employed to enhance the tiers of well-being and mental health support (i.e., prevention and remediation) provided to students in the school systems via our proposed programme.

In the following sections, we propose what such a programme (i.e., A-MINDSET; referring to **A**ccomplishment; **M**eaning; **I**nterconnectedness; e**N**gagement; **D**iscovery of self; **S**trengths; **E**motional Wellness and **T**enacity) may look like with reference to the Singapore context as an example. Although the

programme may have broader applicability, specific adaptations may be required given differences in the needs and sociocultural contexts, such as those found between the West and Asia (e.g., King, 2015; King & Ganotice, 2015; King et al., 2016; Low et al., 2015; Mesurado et al., 2016).

Harnessing the Potential of Technology for Prevention and Remediation

In recent years, digital technologies have been used with some degree of success in well-being programmes, suggesting that it can be harnessed to further the impact on psychological well-being (Peters et al., 2018; Yaden et al., 2018). Technology-aided instruction and interventions hold promise in terms of customization, personalization and scalability, and are time and resource efficient. They afford student ownership and promote self-directedness. Digital technologies further have a natural affinity with adolescents, and researchers recognize the necessity of adapting pedagogy to twenty-first century learners through the introduction of educational technologies (e.g., Spector et al., 2016).

Technology could be used to ensure consistency and sustainability of wellness strategies (Go, 2017). In discussing recent developments in healthcare organisations, Go (2017) describes how Farrer Park Hospital in Singapore used a smartphone application to introduce preventative healthcare into the workplace. She points out that this mobile application (app) facilitates the fostering of a health-conscious community and empowers employees to take responsibility for their health. As part of the initiative, each user of the app receives a holistic and personalised programme and gains access to a plethora of services and tools, including an in-app marketplace to redeem staff discounts, a gamification platform to participate in step challenges, and an in-app Health and Wellness coach, Celli, for them to ask any questions. Go (2017) contrasts this to traditional health and wellbeing initiatives such as fitness programmes and annual health checks that often are abandoned because of their sporadic nature, resulting in an ‘out of sight, out of mind’ effect for employees and employers alike. She urges employers to give more thought to how they can use the technology with which employees are most comfortable, to engage and nudge them towards pursuing well-being. Go (2017) asserts that apart from making health and well-being a central concern for employees and an integral part of their daily routine, mobile devices can also facilitate better collaboration, allowing effective collection of health-related data that employers and their healthcare partners can use to assess health costs and set better incentives for employees. Go (2017) points to a study by Price Waterhouse Coopers on wearable technology in the workplace; 65% of employees believe that technology has a role in their health and well-being, and the percentage is even higher (at 73%) among the millennials.

There has also been increased adoption of telehealth services in Singapore (IHIS, 2017). Telehealth or telemedicine encompasses a broad variety of technologies and

strategies to deliver virtual medical, health, and education services. Currently, telehealth services include a wide range of options for diagnosis and management, education and other related fields of health care such as dentistry, counselling, occupational therapy and chronic disease management.

The technology-based developments in the healthcare sector can be adopted or emulated by schools in promoting mental health and well-being of students. In 2017, the Infocomm Media Development Authority reported a mobile phone penetration rate of 150.8% in Singapore (IMDA, 2018). The rapid growth in the use of mobile phones has improved accessibility to mobile mental healthcare. This suggests the feasibility of using mobile apps to deliver various modules on identifying mental health issues, managing day to day socio-emotional struggles and enhancing the well-being of students. The use of mobile technology to provide well-being and mental health supports at schools will be further elaborated in the next section.

Tiers of Well-Being and Mental Health Support Model

To meet the needs and challenges of schools and to align with the developments in the field both in the general context, as well as in Singapore, we propose a '*Tiers of Well-Being and Mental Health Support Model*' that leverages on digital technologies, specifically mobile apps to provide mental health services in schools (see Fig. 15.1). Consistent with current trends in approaches to mental health care (e.g., Chong, et al., 2013; Kieling et al., 2011; Yeo & Choi, 2011), we conceive of a model that combines both proactive and reactive approaches to enhance psychological well-being, as well as to intervene when cases of mental health concerns arise. We propose harnessing the affordances of digital technologies to help us increase the scale of well-being approaches and mental health services within the school system. More specifically, the first tier of our model focuses on preventive strategies to build skills that enhance well-being among all students, as well as to identify students at risk of mental health issues. The second tier focuses on providing remedial or reactive services to at-risk students that require more intensive mental health support, beyond the provision of preventive measures. These support services would complement existing mental health services in schools and could assist schools with managing growing numbers of students with mental health concerns.

This model aims to leverage on the potential of digital technologies as an intermediary between prevention and remediation, thus potentially improving the overall mental well-being of students while minimizing the occurrence of mental health problems later in their adult life. Teachers and counsellors may use the intervention model to help students to understand common mental health issues and their symptoms.

Tier 1: mental health education and prevention—an intervention for well-being

Tier 1 of the model acts as an enabler to heighten awareness of mental health issues as a school-wide intervention programme. The intervention focuses on helping students

Tier 1: Mental Health Education and Prevention

Psychological Well-Being Training and Supports for Teachers and Students supported by Mobile Apps

- Preventive, universal, school-wide intervention
- Create awareness and increase mental health literacy within the school
- 'A-MINDSET' positive psychology intervention programme to promote well-being
- Mobile app to extend learning and provide access to self-help strategies
- Empower students and teachers with tools to identify mental health concerns
- Identify students at risk for mental health issues

Tier 2: Mental Health Remediation

Telehealth Counselling for Students via Video Conferencing

- Reactive, selective, individualized remediation
- Provide increased, cost-effective support to students who have been identified in Tier 1 as being at risk for mental health issues
- Support school personnel given the lack of manpower and increasing caseloads
- Provide remote telehealth counselling to individual students in schools

Fig. 15.1 Two-tier well-being and mental health support model

manage minor stressors and promote overall well-being, as well as empowering students and teachers with tools to identify mental health concerns. The intervention programme seeks to address these issues through early identification of at-risk students, and, by bringing mental health education into schools, introduce well-being and mental health supports in a more user friendly and interactive manner

to encourage self-directed learning opportunities. By increasing mental wellness literacy, the programme aims to create a safe environment where mental health issues can be acknowledged without stigma, and to foster a culture of empathy and care for students with mental health conditions. The use of technology further allows for profiling of students, pushing relevant content to users and directing them to further counselling support when necessary. By interacting with the app, students will be better equipped to know when they should seek professional help for themselves or others. The model can also contribute to fostering a school environment that is caring and empathetic towards students with mental health issues.

The basis for Tier 1 of the model is the work of Seligman (2011) and other positive psychology researchers. Seligman (2011) contends that well-being comprises five elements, each of which contribute to well-being: positive emotions, engagement, positive relationships, meaning and accomplishment (PERMA). According to Seligman, positive emotions (which we term as Emotional Wellness) refer to hedonic feelings of happiness (e.g., feeling joyful, content, and cheerful). Engagement refers to psychological connection to activities or organizations (e.g., feeling absorbed, interested, and engaged in life). Positive relationships, which is termed as Interconnectedness in our model, include feeling socially integrated, cared for and supported by others, and satisfied with one's social connections. Meaning refers to believing that one's life is valuable and feeling connected to something greater than oneself. Accomplishment involves making progress toward goals, feeling capable to carry out daily activities, and having a sense of achievement. These five pillars contribute to overall well-being and are important areas that individuals pursue for their own sake (Seligman, 2011).

Three additional components: (i) Strengths; (ii) Tenacity; (iii) Discovery of Self, while not having been included in Seligman's (2011) original model, have been identified as important aspects of well-being in the literature, both in Singapore and in the broader context. Strengths is seen as central to well-being theory (Noble & McGrath, 2015). A character strength is "a disposition to act, desire, and feel that involves the exercise of judgment and leads to a recognizable human excellence or instance of human flourishing" (Yearley, 1990, p. 13). Studies have shown that well-being can be increased by identifying, applying and fostering character strengths (Hausler et al., 2017; Lee et al., 2015; Quinlan et al., 2012). Tenacity in our model has the same meaning as the relatively new construct of grit, which is defined as passion, perseverance and dedication toward long-term goals (Duckworth et al., 2007). Tenacity, in the academic sense, is about working hard and working smart over a long period of time (Dweck et al., 2014), and is an important aspect of a person's character (Ng, 2021). Discovery of self consists of self-awareness, being consciously aware of one's own internal states (Sutton, 2016); self-reflection, evaluating and reflecting on one's internal states and psychological processes (Grant et al., 2002); as well as mindfulness, which fosters a non-judgemental acceptance towards one's inner experiences (Harrington & Loffredo, 2011). Research has shown that the practice of self-awareness, self-reflection and mindfulness can alleviate mental

distress, and promote the development of positive psychological and social well-being (e.g., Brown & Ryan, 2003; Harrington & Loffredo, 2011; Sutton, 2016; The Northbrooks Mindfulness Team, 2020).

As an extension to Seligman's original model, we incorporate the three stated components to form our A-MINDSET framework: which refers to **A**ccomplishment; **M**eaning; **I**nterconnectedness (Positive relationships according to Seligman); e**N**gagement; **D**iscovery of self; **S**trengths; **E**motional Wellness (Positive Emotions according to Seligman); and **T**enacity. The framework can guide the design of the well-being interventions (see Fig. 15.2). Each of the domains contribute to the overall mental wellness of individuals, and the affordances of a robust mental wellness mobile app can be harnessed to further the positive impact on psychological well-being (Peters et al., 2018; Yaden et al., 2018).

Teaching activities can be drawn from evidence-based positive psychology programmes and designed to cater to the needs of our students. Extant in the literature is a number of evidence-based, positive psychology programmes and interventions (see for example, GoZen, Geelong Grammar School's Positive Education Programme, the Penn Resiliency Programme, Three Blessings and Signature

Fig. 15.2 A-MINDSET framework for positive education

Strengths; Pluskota, 2014; Seligman, 2011). In a series of studies conducted in Singapore, Caleon and colleagues (e.g., Caleon, 2020; Caleon et al., 2017a, 2017b, 2017c) developed intervention programmes seeking to improve students' well-being and school outcomes using insights from positive psychology. Drawing inspiration from these programmes, and in seeking to build character strengths for instance, students could be asked to identify their signature strengths and to use their strengths more fully in their personal lives. Students could also be encouraged to spot character strengths in others (e.g., Geelong Grammar School's Positive Education Programme). Using the A-MINDSET framework, a holistic programme which incorporates these more specific and targeted interventions can be created.

Consistent with the notion of tapping on technological affordances, students' learning on each theme will be supported by an app that serves as a platform to provide an extension activity, to review and reinforce key concepts learned in each session. The app could be used to deliver a character strengths inventory (e.g., Peterson & Park, 2009; Rashid et al., 2013), to record students' personal strengths, as well as to record the character strengths of others. With regard to building emotional wellness, students could be prompted to use the app to write about their emotions in a journal. The app could also be used to physiologically track student emotions. The app would further nudge students towards pursuing well-being and ensure that well-being remains in the students' minds. Key features of the app are summarised in Fig. 15.3. Through this app, students are able to extend their learning and gain access to self-help strategies anytime and anywhere, to help them to cope with issues that they may be encountering.

A pastoral care and guidance approach, which is developmental and remedial in nature (Tham & D'Rozario, 1988), can be adopted in the delivery of the intervention. Strategies can be deployed to establish a positive classroom climate, where the students feel safe and secure to express their thoughts and share their feelings. This approach recognizes that relationships are important and the quality of these relationships determines each individual's well-being and peace within communities and life contexts.

The A-MINDSET intervention should take a school-wide approach. This intervention will enhance mental health literacy in the student population while leveraging on the mobile application to extend learning, provide access to self-help strategies, and empower students and teachers with tools to identify mental health concerns and identify students at risk of mental health issues. Students at risk of mental health issues, after being identified through the well-being apps, will be subsequently directed to the second tier of intervention.

Tier 2: Mental Health Remediation via Telehealth Counselling

Tier 2 of the model, which complements Tier 1, focuses on remediation and treatment. Emphasis is placed on providing increased and cost-effective support to students who have been identified in Tier 1 as being at risk for mental health issues, and who have been directed to further counselling. Video conferencing is used as the medium for telehealth counselling for students.

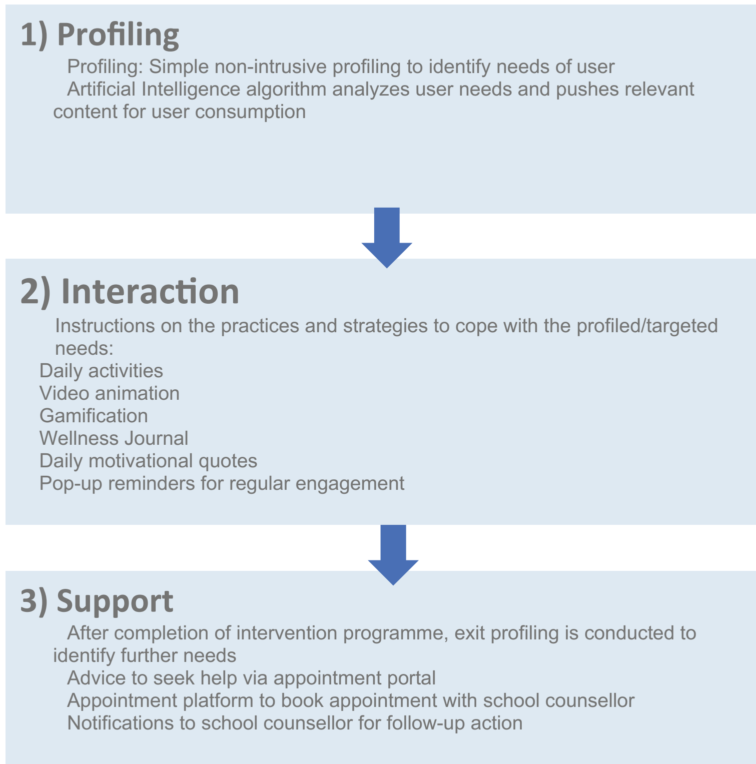

Fig. 15.3 Features of the mental wellness healthcare app

The students of the Tier 2 interventions could be allocated to school counsellors and psychologists for individual and intensive support. Tier 2 interventions are more targeted and individually provided to students to remediate specific mental health concerns via telehealth counselling services. Individual tele-counselling sessions would involve development and accomplishing of treatment goals customizable for each student's needs. In the event that school counsellors or psychologists are overwhelmed with their caseload of students who are in need of more intensive individual intervention supports, trainee counsellors and counselling psychologists could be employed. Within the Singapore tertiary educational context, there are many graduate programmes (i.e., master's degree) that train students to be professional counsellors and psychologists. These trainee psychologists and counsellors are required to complete two to three semesters of practical training to receive their master's degrees in counselling, clinical and educational psychology via a university. The trainee psychologists and counsellors can be deployed to various participating schools located at different areas in Singapore to provide telehealth counselling services as part of their graduate training. This helps to reduce manpower constraints currently faced by schools.

To ensure high standards of telehealth counselling services, trainee counsellors and counselling psychologists would be supervised by registered psychologists and counsellors. Costs for supervision by registered psychologists and counsellors would be included in the tuition fees for the trainees' graduate training programme. Video conferencing sessions between the trainee counsellors/psychologists and students would continue until treatment goals have been reached. This would be a win–win scenario with no cost to the schools, while trainee psychologists and counsellors also receive supervisory practical training in psychology and counselling governed and mandated as requirements of their graduate master's programme. Telehealth counselling services provided by the trainees can be accessed via secure network encrypted mobile platforms such as phones, laptops, tablets and desktops. Overall, the benefits of telehealth counselling include cost-effectiveness, time efficiency, accessibility and convenience of counselling services in the comfort of one's school or home. It would also reduce transportation costs for both counsellors and clients and help redistribute healthcare professionals more effectively across locations of need.

Conclusion

In this chapter, we have envisioned a two-tier Well-Being and Mental Health Support Model conceptualised on the basis of positive psychology and positive education principles and supported by mobile and teleconferencing technology. The delivery model has the potential to be used as a comprehensive organisational tool for the planning and implementation of interventions and school practices that promote well-being and mental health. This chapter uses Singapore as a context with which to envision the implementation of such a delivery model. The model has the potential to be used in other contexts such as workplaces, organisations and communities. Specificities of the model, while supported theoretically, would need further empirical evidence to determine its suitability for youth and its scalability, whether in Singapore or elsewhere. While initial investments may be high, we view the adoption of the model to be a worthwhile cause with which to channel resources. Adopting a holistic and multi-level approach towards promoting well-being and mental health is a worthy goal that outweighs its costs.

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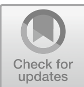
Chapter 16
Shared Book Reading and Children's Social-Emotional Learning in Asian Schools



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Abstract There is increasing attention on young children's mental health and general well-being that serve as the foci of positive psychology and positive education, such as emotions, engagement, and relationships. A growing number of studies in recent years have examined the development of social-emotional skills in early childhood because of its lasting effects on their mental health, well-being, social relationships, and academic performance. Shared book reading (SBR), one of the most popular educational activities in the classroom, has been recommended to facilitate children's social and emotional learning (SEL). This chapter features a systematic review that provides insights on the effectiveness of SBR in promoting SEL in Asian countries. Findings of five studies on school-based SBR and preschoolers' SEL demonstrated the usefulness of SBR in promoting children's social-emotional understanding, racial acceptance, and prosocial skills in Asia. There is a need for more studies about SBR and SEL on children's multifaceted social-emotional competence in schools to be conducted in other Asian countries. Additionally, children's perception of teachers' instruction during SBR and reading materials should be explored.

Keywords Shared book reading · Social-emotional learning · Early childhood education

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Practitioner Points

- Social-emotional learning is recommended to be integrated into early childhood education at school in Asia.
- Shared book reading is an effective approach to promote children's social-emotional learning and facilitate their development in characteristics, such as empathy, prosocial skills, and appreciation of cultural diversity.

Increasing attention has been paid to young children's mental health and general well-being, which serve as the foci of positive psychology and positive education (Seligman, 2011; Shoshani & Slone, 2017). Good social-emotional skills are crucial to one's well-being and mental health because they are associated with a healthier lifestyle and enhanced life satisfaction (Shoshani & Slone, 2017). Early education is vital in equipping children with good social-emotional skills and competencies (Durlak et al., 2011). Several studies have demonstrated the impact of social-emotional development on academic abilities and future employability (e.g., Durlak, et al., 2011). For instance, Durlak et al. (2011) revealed that good social-emotional skills contribute to students' attitudes, behaviors, and academic performance. Montroy et al. (2014) also found that preschoolers who had higher levels of behavioral self-regulation (ability to respond with appropriate actions) performed better in literacy; social skills and problem behaviors were revealed to be the potential mediators of the relationship between behavioral self-regulation and academic achievement. In the long term, prosocial skills at kindergarten (e.g., cooperation, assisting peers, problem-solving) were positively associated with and predictive of the completion of a college degree, attainment of stable employment, and employment in full-time work during young adulthood (Jones et al., 2015). However, how can we promote social-emotional learning (SEL) in early childhood? In the following sections, we unpack the concept of SEL and its relations to children's development in various domains. We then summarize the popular strategies used in early childhood education to promote SEL before delving into shared book reading (SBR), one of the most popular activities used at preschools and kindergartens. Subsequently, we present key studies focused on SBR and SEL implemented in Asian educational contexts. Critical issues and future research directions on how we should strengthen children's SEL via SBR in the future are discussed at the end of the chapter.

Social-Emotional Learning as a Multifaceted Construct

SEL is the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions (CASEL, 2019). Underpinning this definition are the knowledge, skills, and attitudes that require the cognitive capacity, practice, and mindset to enact the learning of social and emotional abilities (Frydenberg et al., 2017). The five social and emotional competencies listed

by CASEL can be further aggregated to social competence (i.e., managing relationships) and emotional competence (i.e., controlling emotions) (Weare & Gray, 2003). The former refers to the development of prosocial skills for a positive relationship with others via cooperation, sharing, communication, perspective-taking, and conflict resolution (Yoder, 2014), while the latter refers to acquiring and practicing skills for comprehending and managing emotions and interactions (Stacks & Oshio, 2009).

Studies that investigate children's socio-emotional abilities typically assess competencies such as empathy, social-emotional adjustment, social cognition, false belief, and perspective-taking. These skills are entwined with the core competencies of SEL; for instance, showing empathy is considered a demonstration of social awareness. Contemporary frameworks and guidelines of social-emotional development like CASEL underscore systematic SEL from a young age.

The Importance of Social-Emotional Learning in Early Childhood Development

Social and emotional competencies are fundamental to children's engagement and capacities in learning as well as their well-being (Denham et al., 2012; Shoshani & Slone, 2017). In schools, children with better social-emotional skills concentrate better on classroom activities and teacher's instructions. Preschoolers' social competence, such as social understanding, is positively related to their empathy skills and can predict their sharing behaviors (Ongley & Malti, 2014). Such abilities affect how children are socially accepted by peers and teachers (Denham & Brown, 2010). Consequently, these abilities influence children's interpersonal relationships with others and affect the cognitive, social, emotional, and academic resources available for their learning. Children with good social-emotional skills might also be better at expressing their emotions when handling negative or difficult circumstances (Denham et al., 2012). In contrast, having weaker social-emotional abilities may result in children's social isolation and dislike of activities, peers, and adults in the learning environment. As a result, these children might be less engaged in school activities (Denham & Brown, 2010), obtain a lower level of support, suffer from poorer academic performance possibly leading to grade retention and school dropout (Denham & Brown, 2010).

The impact of social-emotional skills on school engagement, academic outcomes, and future employability, underlines the importance of promoting SEL within the early childhood learning environment. This importance is recognized by adults who play a key role in fostering these skills during children's formative years. The Singapore's Early Childhood Development Agency (ECDA) conducted a study in 2014 involving 3,800 parents and found that the top three aspirations parents had for their children were 'to have a happy life', 'to be gracious and caring to others' and 'to get along well with others'. These aspirations align with the social-emotional competencies of self-awareness and positive self-concept, through which children build up

their self-worth and identify their likes and personal strengths. These competencies then enable them to recognize others' mindsets and show an appreciation of diversity. Bautista et al. (2016) reported that 123 early childhood educators in Singapore ranked social-emotional development as the most important learning area of focus compared to other areas such as language, literacy, and numeracy. Although the researchers did not elicit information on the educators' rationale for their prioritization, the results of the study showed that early childhood educators value the fostering of social-emotional development at a young age. Despite having frameworks of SEL developed by different organizations (e.g., CASEL, 2019; Singapore's Ministry of Education, 2013), little is known about how early childhood educators utilize these frameworks within the Asian context (Ng & Bull, 2018). In the next section, we summarize a series of approaches that early childhood educators have adopted to promote SEL. More specifically, we focus on SBR, a well-established approach with significant potential in enhancing the SEL of preschool children.

The Promotion of Social-Emotional Learning in Early Childhood Education

Activities to Promote Social-Emotional Learning in Educational Settings

SEL can be realized in daily teaching and learning practices, especially if early educators face challenges in implementing SEL-specific programs. Ng and Bull (2018) explored potentially effective pedagogical practices by investigating the situational factors influencing the frequency of SEL, and the strategies adopted by early childhood educators to facilitate SEL during day-to-day interactions within six kindergarten classrooms. Higher frequencies of teachers' facilitation were found during small group activities compared to large group activities, outdoor play than indoor lesson time, as well as intentional teaching over incidental teaching throughout a typical day at school. Additionally, researchers also observed the teachers' use of four strategies in supporting SEL—setting a positive tone, suggestion of solutions, task allocation, and extension—and reported that social and emotional skills are taught informally through opportunities that occur within daily activities, rather than with formally structured programs. This integration of SEL teaching within the existing curriculum has also been supported by other studies (e.g., Yang et al., 2021).

In the following section, we summarize SEL-related oral activities and discuss the usefulness of these activities in early childhood education. Information about the implementation of each activity and its relevance to SEL has been summarized in Table 16.1.

The activities mentioned in Table 16.1 are commonly practiced in the upper primary levels, even though the early years are crucial for a child to develop social-emotional skills (Sun, 2019; Sun et al., 2021b). Some of these activities might be more

Table 16.1 The common activities adopted in early childhood educational settings

Activities	Implementation	How the activities promote SEL
SBR (Massey, 2004)	Promoting SBR in class provides teachers the opportunity to conduct rich conversations with children. For example, from the content of stories, teachers can relate to topics such as ways to manage their emotions, being caring towards one another, expressing kindness, decision making, positive relationships, and handling challenging situations	This activity provides teachers and children the opportunity to conduct rich conversations, which in turn promote children's literacy skills and social cognition
Post-reading activities (Ko, 2017)	After SBR, teachers plan and conduct activities such as art, drama, letter/poem writing, singing, games, and campaigns	These post-reading activities are useful in helping students reflect and practice what they have learned through the readings
Role-playing (Erikson, 1968)	Students play different roles in group activities. For example, by playing roles such as leader, secretary, timekeeper, and member, students get to experience what it is like to have different types of responsibilities and how every role plays a huge contribution to a team	As the students are taking up different roles, they experience what it is like to be a different character. By doing this, children can empathize with others and put themselves in the shoes of others. Additionally, role-playing could help children learn conflict resolution and problem-solving
Teamwork (Liem et al., 2013)	Students are put in teams and held responsible for their peers' safety and trust one another	This activity helps children build self-awareness and self-management competencies as well as social awareness and relationship management skills
Class discussions (Liem et al., 2017)	The discussions are stimulated by news reports, videos, movie clips, role plays, scenario-writing, reflection, logs, animation, debates, storyboards, case studies, pictures, and analogies	Group discussions after activities help children foster social-emotional competencies, self-awareness, self-management, social awareness, relationship management, and responsible decision making

suitable for older children due to the cognitive demands of the task. For instance, role-playing and teamwork might require children to understand the expectations of their roles and be aware of how they should act in the performance. In comparison, SBR and post-reading activities are used more widely with younger children (Sun et al., 2020). According to Selman (1971), introducing and implementing SEL activities at a younger age is developmentally appropriate, as younger children may benefit from recognizing their emotions through different experiences gained from SEL activities. For example, Theory of Mind is a social-emotional skill that helps children understand other's mental states like thoughts, beliefs, and intentions. This skill develops quickly when children are at the age of three to six years old (Ziv & Frye, 2003). When children are engaged in SBR, they may devote themselves to conversations about the character's emotional state or motivations, eventually enhancing their Theory of Mind through reading. In the following section, we continue to explore SBR—an activity that is highly suitable for younger children.

Shared Book Reading and Social-Emotional Learning in Early Childhood Education

SBR is an interactive reading activity between adults and young children (Bus et al., 1995). Traditionally, it has been taken as an effective approach to enhance children's early language and literacy development (Sun & Yin, 2020a, 2020b; Sun et al., 2021a). However, in recent years, researchers have also realized its potential contribution to children's social and emotional understanding (Sun, 2019). Both the contents of the books and the way adults interact with children can facilitate young learners' SEL (Sun et al., 2019a, 2020, 2022). Content-wise, researchers found that even storybooks that do not focus on SEL issues generally contain social-emotional elements which occur every three sentences (Dyer et al., 2000). Storybooks, like fairytales, are rich in social-emotional themes, and adults can use these books to help children work out the complex relationships between reality and mental representation (Adrian et al., 2005). Researchers suggest that adults choose books with explicit social-emotional contents (Dresser, 2013) to facilitate children's understanding of other people's mental states (Adrian et al., 2005), motives (Bruner, 1990), and prosocial skills (Zeece, 2004). In the early education settings, teachers may direct children's attention to the illustrations of the book for their better understanding of the plots, thereby giving children enough time and opportunities to digest the plots from different perspectives and make connections to their real-life experiences (Sipe, 2015).

The communicative approaches between adults and children in SBR may also affect children's SEL (Aram & Shapira, 2012; Aram et al., 2017). During SBR, adults often play the role of readers, managers (motivators), clarifiers, and probers (Sun & Verspoor, 2020; Sun et al., 2020). Adults introduce different values to children and encourage them to behave in a socially acceptable manner. The frequency and

quality of SBR have been associated with children's empathy skills (Aram & Shapira, 2012) and social-emotional adjustment (Aram & Aviram, 2009).

O'Conner et al. (2017) summarized a series of strategies for SEL during SBR at preschool. These strategies include reading stories that explore a wider spectrum of emotions, asking children perspectival questions and engaging them in problem-solving, discussions of children's and other's feelings, and more. Conversations about the mentioned strategies can invite children to discuss the behaviors, intentions, and emotions of the main characters of the story, thereby helping them establish a link between the story's plot and the main characters' intentions and motivations behind their action (Bruner, 1990). The reading procedure may generate a positive mood for both adults and children; this encourages children to speculate their environment and regulate their emotions (Aram & Shapira, 2012). In sum, SBR offers rich opportunities for children to develop SEL by exposing them to other people's "emotions, thoughts, intentions, beliefs, and desires" (Aram et al., 2013, p. 111). An exemplar potential of SBR in SEL in early childhood education, particularly meaningful in a multilingual/multicultural society, is illustrated as follows.

Developing a positive attitude towards racial and cultural diversity. When children are exposed to children of a different culture with whom they have never interacted, they become curious and may not understand the differences between race and related social issues. In this circumstance, SBR may be useful in promoting children's understanding of racial and cultural diversity as children's literature often deals with such themes. Therefore, SBR can function as an important tool to expose children to complex social issues and help them appreciate varied cultures. Reading multicultural literature can also encourage children to open their minds to other ethnicities (e.g., with different skin colors), get rid of the prejudice towards certain racial groups, and cultivate democratic attitudes towards social diversity (Koss, 2015). While reading books, teachers should make sure that the students can participate in the discussion actively. By discussing sensitive topics in class, students can learn about different social situations and develop an awareness of the right manner to treat others. For example, when children have unpleasant impressions of people of different skin colors, they may make negative comments. Teachers should seize the opportunity and correct children's behaviors of judging others by skin colors and encourage them to embrace diversity by being more accepting of others despite physical differences. Children could also be told to consider the feelings of the minority groups when hurtful things are said, thereby honing their empathy. This is in line with Aram and Shapira (2012), who revealed that there is a link between SBR and their development of empathy. Through SBR, adults can teach children to embrace differences and be understanding of others by using the contents of stories to help children connect with others of different backgrounds. By providing an open space for children to express their thoughts honestly, teachers can cultivate children's positive attitude towards racial and cultural diversity. In sum, SBR is a good platform for children to be exposed to different social situations and to learn how to relate to other people's emotions, thoughts, intentions, beliefs, and desires.

Shared Book Reading and Social Emotional Learning in Asia

The Differences in Teachers Practices on Shared Book Reading in the West and East

The diverse practices in Asian and Western education settings are influenced by the differences in the embedded cultures. Whereas most Western countries including the United States, United Kingdom, and Australia have a relatively individualistic culture; Asia–Pacific regions, such as mainland China, Hong Kong, Korea, and Singapore, are characterized by a collectivist culture. Cultural orientation or cultural differences can influence the development of the five social and emotional competencies (Collie et al., 2017). For instance, self-awareness and self-management (e.g., emotion regulation) skills tend to be emphasized in an individualistic society, while social-awareness and relationship skills tend to be more emphasized in a collective society. Furthermore, cultural differences also impact the way social and emotional skills are taught. As interest in SEL across countries has increased over the decade, traditional education systems are transforming to accommodate SEL implementation. For instance, China focuses on integrating moral and character education into its national curriculum to nurture well-rounded, ethical, and patriotic citizens (Dello-Iacovo, 2009).

Moreover, methods of teaching influence the way children learn. Although SBR has been used both in the East and West, teachers' actual practice in class may be substantially different. For instance, East Asian countries tend to appreciate Confucian values and stress the teachers' authority and children's conformity in class (Lam & Goo, 2015). Such pedagogical values may result in teacher-dominant conversation, thereby leaving little chance for children to participate in the extended dialogue. Moreover, performance-oriented syllabus and exam-oriented teaching styles further limit the opportunities of having extended conversations in class (Bautista et al., 2018; Ng et al., 2021). The differences in teaching culture and pedagogical focus would affect teachers' instruction (Sun et al., 2020). For example, in Singapore, some teachers may adopt a teacher-centered approach; they seek to be dominant in class and expect predetermined answers from their students (Curdt-Christiansen & Silver, 2013). When using SBR for literacy education, teachers in Singapore were found to adopt a scripted approach and generally conducted the lessons with closed questions, providing few opportunities for children to be engaged in a sustained conversation (Sripathy, 2007).

Studies on Asian Teachers Shared Book Reading and Children's Social Emotional Learning

How has SBR been used to facilitate children's SEL in Asia? Following a systemic review conducted at the time when this chapter was being written (Sun et al., 2019b), we found eleven studies that had investigated the use of SBR to promote young children's SEL in Asia. Many of the studies focused on parent–child SBR and SEL at home, whereas only five studies have been dedicated to SEL and SBR in the school setting. The latter is crucial as it was mentioned in the previous sections that teachers could provide unique opportunities in class to enhance children's SEL. Furthermore, reading at home is different from reading in school. In the home environment, SBR usually takes place in a one-to-one format (i.e., one parent to one child); at school, SBR usually occurs in a group manner (i.e., one teacher to several children) and teachers need to handle the dynamics of the interaction effectively (Ziv et al., 2014).

Table 16.2 summarizes five studies that focused on SBR and SEL in an Asian school setting. These studies have only been conducted in four countries: Israel, Jordan, Korea, and Singapore. Four of the five studies were conducted at school(s), while the fifth study compared home and school settings. Four studies adopted the intervention design without a control group. One study (Betawi, 2015) reported that children's social and emotional skills significantly improved by reading books related to social and emotional themes at school. Another study (Kim et al., 2016) looked into children's responses during SBR with the use of books on diversity, as well as teachers' interviews and parents' interviews, and concluded that there was a positive change of perception towards children's initial social understanding after the SBR. The third study (Ko, 2017) noted that book reading enhanced children's social understanding after looking into children's responses during SBR and the post-reading activities, as well as teachers' interviews on changes in children's social behaviors. In an observational study (Ng & Sun, 2021), teachers were observed to facilitate SEL more frequently in aspects related to interpersonal learning than those of intrapersonal learning, where children verbalized responses to demonstrate abilities and preferences, reason emotions, identify issues and problems, as well as brainstorm reasons, consequences, and solutions. The fifth study (Ziv et al., 2014) compared mothers' and teachers' use of mental-state terms during SBR, focusing on the process of conducting SBR and types of talk used during the activity. The results revealed that both mothers and teachers used and discussed mental-state terms denoting cognition, emotion, and desires with children during SBR. Teachers used emotion- and desire-related mental-state terms more often than mothers.

Table 16.2 Summary of studies on teachers' SBR and children's SEL conducted in Asia

Authors (year)	Country (region of Asia)	Participants/measures/design	Main findings
1. Betawi (2015)	Jordan (Middle East)	Participants: 10 toddlers (6 boys, 4 girls) Measures/design: SBR took place for 5 to 8 min daily over three weeks Children's social and emotional skills were evaluated with adapted Social Skills Rating Scale	Toddlers' social and emotional skills improved following SBR activity, using books related to social and emotional themes
2. Kim et al. (2016)	Korea (East Asia)	Participants: 12 five-year-olds children (6 boys, 6 girls) Measures/Design: 1. Children's responses during SBR with eight books that reflect racial diversity, lives of African people, racial issues relating to African American, read over 5 months 2. Teacher's interview on multicultural experiences and views 3. Parents' interview about child's attitude and home literature on racial issues	As literary discussions carried on, children's attitudes and perceptions towards Black people improved
3. Ko (2017)	Korea (East Asia)	Participants: 14 teachers and 160 children from 8 kindergartens and 6 nurseries Measures/design: 1. Children's responses about emotions during SBR interactions and post-reading activities 2. Teachers' interviews on changes in children's behaviours in the classrooms	Book reading enhanced children's social understanding and behaviors, as reported by the teachers. For example, children were observed to initiate interaction with peers

(continued)

Table 16.2 (continued)

Authors (year)	Country (region of Asia)	Participants/measures/design	Main findings
4. Ng and Sun (2021)	Singapore (South-east Asia)	Participants:17 teachers and 152 children (4–5 years old) from 9 kindergartens and 8 childcare centers Measures/design: The study developed a comprehensive coding scheme to explore teachers' strategies and children's corresponding responses in SBR for SEL	Teachers prompted children to identify their own abilities and preferences, as well as to label others' emotions most frequently. Children were able to provide relevant responses to teachers' prompts
5. Ziv et al. (2014)	Israel (Middle East)	Participants: 60 mothers and their children (36 girls, 28 boys; average age: 57.26 months); 60 preschool teachers and 300 children (154 girls, 146 boys; average age: 53.53 months) Measures/design: Mothers' and teachers' utterances during SBR were coded for two main categories: • Mental-state vocabulary terms Central mental aspects (false-belief, reality, mental causality, points of view)	Both mothers and teachers used mental-state terms denoting cognition, emotion, and desires while reading and discussing the book with children; used cognitive terms more frequently than emotion and desire terms. However, teachers used emotion- and desire-related terms more frequently than mothers Books related to false-belief themes encouraged cognitive state talk among both mothers and teachers, who produced multiple cognitive terms ("think", "know", and "pay attention")

Critical Issues and Future Research Directions

This section elucidates critical issues that have been identified as crucial to the implementation of SBR to facilitate SEL in Asian early childhood education. These issues provide the basis for conceptualizing future directions of SBR and SEL in the Asian context.

Although children's SEL may greatly benefit from SBR, only a few studies on SEL and SBR have been conducted in Asia. Morever, these studies only explored certain aspects of social-emotional skills, leaving the effectiveness of SBR on other skills such as establishing and maintaining positive relationships uncovered. As presented in the first section, SEL is a multifaceted construct and researchers should examine its relationship with SBR comprehensively before making any general conclusion of its usefulness in promoting SEL. Furthermore, while many of these studies were conducted on children, they did not necessarily include the participants' reactions. By having short interviews with children to find out about their thoughts and what they have learned, there would be a clearer understanding of whether preschool children can assimilate what they have learned through SBR. Collecting information on children's outcomes would also be an effective way to gather relevant information. Besides, little is known about how the content of the books would influence children's SEL in Asia. Although three out of the five Asia-based studies on SBR examined within this review focused on interactive strategies that teachers adopted during reading and have broadly discussed the benefit of SBR on children's SEL, there remains an information gap concerning how specific literature content may impact a young learners' social-emotional skills. As story plots are important to children's SEL, researchers should investigate the impact of various books on children's different aspects of social-emotional skills. Having such information will allow for a better understanding of the causal effects of teaching and learning. Besides, it would also be of interest to know what type of content should be provided to children to promote their SEL. Such knowledge will help schools develop programs and curricula that are more holistic and support novice teachers in their preparation of a teaching plan.

Given the issues mentioned above, there is a pressing need for more research to be conducted in Asian countries with a focus on young learners from various political, social, and economic statuses. Studies framed in Asian settings will also contribute to providing a global perspective on the effectiveness of SBR on early SEL from culturally diverse situations. More aspects of the SEL should be addressed in the studies to provide policymakers and early educators with broader insights on various aspects of socio-emotional skills that can be employed in teaching. Researchers should not only conduct studies on children (e.g., assess children with standardized test) but also with children (e.g., use qualitative approaches to obtain in-depth information) to obtain information on children's attitudes towards different teaching approaches and reading contents.

Conclusion

This chapter unpacks the construct of SEL and its importance before zooming in on SBR—one of the most widely used approaches in early childhood education, to illustrate how SBR can be employed to promote children's SEL. Recent findings on young children's SEL and teacher-led SBR in Asia were revied. These findings indicate that teachers' and children's interactions can influence the extent of children's SEL during SBR. Early childhood educators may use multicultural picture books to heighten children's cultural and racial awareness as well as empathy and acceptance of differences of others. The five studies on SBR and SEL conducted with preschools demonstrate the potential of SBR as a useful activity to assist children's emotional understanding, social understanding, racial acceptance, as well as intrapersonal and interpersonal skills in the Asian context. More studies are needed to elucidate the impact of SBR on children's SEL in other Asian countries and to explore children's attitudes and learning outcomes in response to different teaching approaches and reading materials.

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Chapter 17
Deep Breathing and Mindfulness: Simple Techniques to Promote Students' Self-regulation and Well-Being from the Inside Out

Kiat Hui Khng

Abstract This chapter describes two sets of simple techniques—deep breathing and mindfulness-based practices—that have been successfully used in schools to help children cope with stress and anxiety, regulate emotions, and improve cognitive, social, and psychological well-being. Deep breathing can be easily taught to children and applied in a self-directed manner to immediately regulate adverse effects of anxiety, stress, or other negative affectivity and arousal, enhancing emotional and cognitive well-being. Though mindfulness-based practices may also be applied for immediate self-regulatory effects, practice over time brings additional benefits such as self-and-other awareness and compassion, and better intra- and interpersonal relationships. Both techniques can promote cognitive, emotional, and behavioral self-regulation, contributing towards resilience and well-being. The evidence supporting these techniques, their mechanisms, and how they complement positive psychology and social emotional learning are described. Applications in Asian school settings and issues related to implementation are discussed.

Practitioner Points

- Deep breathing and mindfulness-based practices are evidence-based techniques that can be taught to children in schools to help with their self-regulation and well-being.
- The two "inside out" techniques can complement other positive psychology and social emotional learning programs.

An important role of education is to prepare children for life. Along with the changing exigencies of modern life and society, and advancements in scientific

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research and theory, educational goals have evolved to take more holistic perspectives. Well-being, and fostering skills that enable and promote lifelong well-being, has become a prominent objective in educational systems around the world, along with the shift towards developing positive psychological assets that allow individuals to flourish and thrive (see e.g., Miller et al., 2009). An important life skill for maintaining well-being—across cultures and contexts—is the ability to self-manage or self-regulate. Schools are increasingly aware of the importance of equipping students with coping tools or resources for their self-regulation of, for example, stress and anxiety, and to develop protective factors promoting resilience and well-being.

This chapter begins with a brief introduction to the broad concepts of well-being and self-regulation, how they are intimately related, and their relevance to education. The next section introduces simple, evidence-based techniques that schools can teach to students to enhance their self-regulation and well-being. The scientific basis and evidence supporting these techniques and their mechanisms, how they relate to positive psychology (PP) and social emotional learning (SEL), and their applications in Asian school settings, are briefly discussed.

Well-Being and Self-regulation

Well-being is a broad, multifaceted construct. Conceptualizations of what constitutes a child "feeling and functioning well" vary, but core aspects of well-being generally include physical, social, cognitive, psychological (also studied as mental-health), and economic dimensions (Pollard & Lee, 2003). With increasing attention on the importance of self-regulation for lifespan development, some recent conceptualizations consider self-regulation a domain of well-being (e.g., Newland, 2014). However, as discussed later in this section, self-regulation cuts across well-being domains and should be regarded as a domain-general competency that can contribute to well-being.

Well-Being

How well-being in general and within each domain is defined and measured can vary vastly across studies. Psychological well-being has been reflected by a range of negative or deficit indicators (e.g., depression, anxiety, adjustment/behavioral problems, and psychiatric symptoms) and positive indicators (e.g., self-esteem, happiness, resilience, coping, and socio-emotional adjustment/functioning). Other components of well-being cover the social (e.g., relationships with peers and family), physical (e.g., physical health), cognitive (e.g., academic achievement), and economic (e.g., family income) realms (Pollard & Lee, 2003).

Studies of child and youth well-being typically focus more on physical, social, cognitive, and particularly, psychological domains (Pollard & Lee, 2003). The past

two decades saw a shift in child well-being research towards children's self-appraisals or their subjective well-being; a model of well-being focused on strengths and positive outcomes rather than risks and deficits (Newland, 2014; Pollard & Lee, 2003), and the associated emphasis on building preventive competencies that promote health and wellness rather than or in addition to assessing states and reducing pathology or afflictions (e.g., Miller et al., 2009). Education systems have traditionally focused on developing some aspects of children's well-being more (e.g., academic competence, physical health and fitness, character strengths) than others; the recent years have seen a new emphasis on mental health and psychological well-being, and in developing related skills such as resilience and socio-emotional competence.

Self-regulation

A key competency underlying well-being is self-regulation, which has been called the "key to success in life" (Baumeister et al., 2002). International longitudinal studies have found early self-regulation to be one of the most important predictors of success in various domains in later life (see e.g., Diamond, 2013). Related to constructs/concepts such as self-management, metacognition, coping, and self-control, self-regulation can be broadly summed as "the many processes by which the human psyche exercises control over its functions, states, and inner processes" (Vohs & Baumeister, 2016, p. 1). It refers to the various "self-corrective adjustments" an individual makes, volitionally and consciously or automatic and unconsciously, that allows the individual to "stay on track" towards current or longer-term goals or standards (Carver, 2016, p. 13). Self-regulation is sometimes used interchangeably with self-control, which tends to refer to more conscious and deliberate efforts (e.g., resisting temptations or impulse control). Self-regulation has been described to encompass a broader scope that includes automatic or nonconscious processes (e.g., physiological homeostasis to maintain a stable and optimal state of functioning) (Vohs & Baumeister, 2016).

Self-regulation involves a balance between top-down cognitive control and bottom-up, stimulus-driven arousal (Blair, 2016). Top-down cognitive control is supported by a set of executive functions (EFs): *working memory* (WM) enables one to monitor, update, and manipulate information in one's mental workspace; s*hifting*, *switching,* or *cognitive/mental flexibility,* enables one to switch between mental sets (e.g., task rules); *inhibition* or *inhibitory control* enables one to resist interference from irrelevant or conflicting information, inappropriate impulses and prepotent responses (e.g., Perone et al., 2018). In self-regulation, EFs work together to regulate cognition, emotions, and actions in support of goal-directed behaviors. For example, cognitive self-regulation to focus attention on an object/task involves *maintaining/updating* the task goal and rules in mind (WM), *inhibiting* distractors competing for and taking attention away from the task at hand, *monitoring* when attention has drifted (WM) and *shifting* attention back to the object/task.

Cognitive, Emotional, and Behavioral Self-regulation

Although self-regulation is often differentiated among cognitive, emotional, and behavioral domains, they are intimately related and interact. From infancy, humans show the ability to regulate emotional distress by shifting their attention to other stimuli in the environment—that is, via cognitive/attentional regulation (Harman et al., 1997). At very young ages, self-regulation is not well-developed and regulation is often other-initiated (e.g., caregiver prompting a distressed baby to look at a toy). Development in *self-regulation* across childhood increases with brain maturation, particularly the prefrontal cortex and the EFs they support (e.g., Perone et al., 2018). Sometimes studied as the development of effortful control (over automatic tendencies or responses), the stronger biasing from top-down cognitive control versus bottom-up emotional reactivity allows for better self-regulatory outcomes with development (e.g., Eisenberg et al., 2016).

Throughout development, evidence is found supporting the positive link between individual differences in attentional control (i.e., cognitive self-regulation) and emotional regulation[1] and well-being. Furthermore, poor cognitive regulation can result in poor emotional regulation, resulting in increased need for emotion-linked behavioral regulation; poor emotional and/or behavioral regulation can in turn impact children's social functioning and development (Eisenberg & Fabes, 1992; Rothbart et al., 2016). Hence, from academic performance to psychological distress, to social competence and moral development, to substance abuse and criminality, self-regulation impacts practically all areas of an individual's functioning and well-being (see e.g., Diamond, 2013; Eisenberg et al., 2016).

Promoting Self-regulation and Well-Being in Schools

Several approaches such as positive psychology/education and SEL are used in schools around the world to enhance children's resilience, social-emotional competences and mental well-being. A related approach that has seen growing subscription from pre-kindergarten to university education, extending to even educators and parents (i.e., a community approach) is mindfulness-based programs and mindfulness-based practices (MBP)—which overlap with and are sometimes incorporated with larger PP and SEL programs.

[1] Apart from where regulation is specifically other-initiated, regulation in the individual refers to self-regulation.

Mindfulness and Cognitive-Emotional Self-regulation and Well-Being

The practice of mindfulness "as a self-regulatory coping strategy" was first introduced to help patients cope with the stress and suffering of chronic pain, in a program that became the well-known Mindfulness-Based Stress Reduction (MBSR) program (Kabat-Zinn, 1982, 2003). Publications and reviews of the positive effects of MBSR has led to great interest in MBSR-based practices and their integration in a wide range of clinical and non-clinical settings (e.g., Chiesa & Serretti, 2009; Keng et al., 2011), including in education (see e.g., Maynard et al., 2017).

Mindfulness and Self-regulation

Mindfulness refers to "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (Kabat-Zinn, 2003, p. 145). It is essentially about paying attention in a certain way—with deliberate intention to give attentional focus to whatever is arising in the present moment (i.e., awareness), with an attitude of openness and objectivity. Paying attention is a universal and natural ability, though the quality and the way with which attention is deployed, varies across individuals—some are more prone than others to paying attention in the mindful manner described.

Sometimes referred to as mindful attention training, a variety of MBPs are used in mindfulness-based programs to give repeated practice in paying attention in a mindful manner. Exercises typically involve directing one's attention to focus on an object or sensation (e.g., sensations of the breath in the body during mindful breathing), *maintaining* attention on the object of present focus, *monitoring* and noticing when attention has drifted to, for example, ruminative thoughts, resisting/*inhibiting* engaging in elaborative processing of those thoughts, and *shifting* attention back to the present focus of attention. The attitude of nonjudgment involves being open and curious to the object/event/experience of attention, which necessitates *inhibiting* prepotent, automatically-triggered biases in perception, and seeing and accepting the object/event/experience as it presents itself. It is acknowledged that the mind is naturally prone to wandering, and attention prone to drifting. Any thought or emotion that arises during the practice is simply observed/noticed and acknowledged, *inhibiting* the prepotent/reflexive tendency to ascribe judgment or value to their content, such as self-blame for failing to maintain focus.

Practicing mindfulness is, thus at its core, practicing attentional self-regulation and the underlying EFs. Improvement in EF, attentional control and self-regulation is often found with mindfulness-based training (e.g., Chiesa et al., 2011; Meiklejohn et al., 2012), including evidence suggesting an enhanced self-regulatory neural system (Kilpatrick et al., 2011; Malinowski, 2013). As previously discussed, the improvement in attentional control and self-regulatory functions also allow for better

emotion and behavior regulation, which can in turn facilitate interpersonal or social functioning and well-being (e.g., Malinowski, 2013).

In addition to mindful breathing, common MBPs include mindful listening, watching, eating, walking and movement. Body scan is often practiced, in which attention is swept over the parts of one's body (e.g., from tip of the toes to top of the head), being aware of the sensations experienced in each part as well as a sense of the body as a whole. Typically, the exercises progressively increase in duration. When stability of attention is achieved, one practices broadening the focus/scope of attention to include all sensations and mental events as they occur in the moment. Though practicing an open and nonjudgmental attitude naturally fosters self- and other-kindness and compassion, explicit kindness-compassion practices, such as sending kind thoughts to oneself/others, are sometimes included. In addition to formal practices, practicing mindful attention informally in daily activities and interactions is encouraged (Meiklejohn et al., 2012).

It is important to note that the goal in MBP is not to suppress thoughts or emotions—they are treated with the same openness, curiosity and acceptance as part of the moment's experience—but to have the self-awareness to notice when they arise and the ability to choose to redirect attention flexibly back to the object of focus. Hence, MBP may also be experienced as empowering with its emphasis on personal agency, self-awareness and choice—where individuals can assume some responsibility for and play an active part in their own well-being (Kabat-Zinn, 1982). The ability to always choose to start again, over and over as one encounters failure to keep focused during a practice can also be empowering to experience, thereby building resilience. The practice of noticing, acceptance and nonjudgement in MBP has been argued to be valuable for children and adolescents, in particular, in getting to know and be comfortable with their thoughts and emotions. The objectivity and detached observation allows one to dissociate transient negative emotions from self-identity; the self-awareness and self-monitoring also allows for timely recognition of the need for deliberate actions towards self-regulation.

Mindfulness is "a way of being that takes ongoing effort to develop and refine", rather than "simply a method that one encounters for a brief time at a professional seminar and then passes on to others for use as needed when they find themselves tense or stressed" (Kabat-Zinn, 2003, p. 149). However, though many benefits of MBP may only surface after a period of practice (e.g., developing positive dispositional traits), some immediate benefits on cognitive, emotional, and behavioral regulation (i.e., positive subjective states and well-being) can be experienced with brief practices—even in young children (e.g., Nadler et al., 2017). On the most basic level, MBPs provide a stable "anchor" to which one's attention can always return. For instance, when it is hard to keep a clear and calm mind in times of negative emotional arousal, one can take a short pause to quickly anchor their attention back to the sensations of the breath, to a space of inner calm. Single sessions of brief practice (8–20 min) have been found to reduce physiological indicators of anger even in novices (Fennell et al., 2016), increase self-reported calmness in children (Nadler et al., 2017), and help adolescents disengage from distress ruminative states (Hilt & Pollak, 2012). Though effects can vary, documented benefits include

improved attention and EF; reduced stress, depression, anxiety and psychological distress; and increased self-compassion, empathy, and resilience (for reviews, see e.g., Chiesa et al., 2011; Dunning et al., 2018; Keng et al., 2011; Meiklejohn et al., 2012).

Mindfulness in Schools

Recognizing that MBPs provide an accessible way to help children with cognitive, emotional and behavioral self-regulation, MBPs are increasingly incorporated to support education in schools. Practices for children are typically age-appropriate versions that are shorter, include more movement-based exercises, and use analogies and metaphors involving familiar objects and activities that are engaging for children. Elements such as awareness of emotions may also be given more explicit focus. For example, "Mini-Mind" for preschools comprises 25-min sessions, with activities such as "Glitter jar" (see Wood et al., 2018), a commonly used exercise for children and youths to practice mindful watching and observing, and to illustrate the concept of how thoughts and emotions stirred up by events swirl in the mind, and how stillness and clarity can be found by learning to "settle the monkey mind" (Arthurson, 2015).

Manualized mindfulness-based curricula for children and schools have been developed: some with training and support for educators, school leaders, and even parents; most include variations adapted for different ages. Widely-used programs include the Mindful Schools (K-12), Learning to BREATHE (adolescents), and the ".b" series (7–18 year olds). Some combine mindfulness-based training with other programs, such as SEL or PP (see e.g., Felver et al., 2016). In MindUP (PreK-8), for example, Mindful Awareness forms one of "four pillars to promote positive mental health and well-being", together with PP, SEL, and Neuroscience (Schonert-Reichl et al., 2015). Likewise, Mindfulness forms one of the Four Pillars of Wellbeing in The Contentment Foundation's (TCF) curriculum (PreK-12), together with Community, Self-Curiosity, and Contentment; Social, Emotional and Ethical Learning (SEE; K-12) enhances SEL with the cultivation of mindful attention, and resilience, compassion, and non-sectarian ethics.

The cultivation of mindfulness is most effective when fostered using an institutional or community approach. Programs such as Mindful Schools provide not just curricula for students and training for school teachers to teach them, but also training in school-wide implementation for educators and school leaders; many include workshops for parents. The TCF Four Pillars is a whole-school program focused on supporting schools with school-wide implementation and also provides accompanying apps for families to extend practices into the family unit and the home environment.

A Complementary Skill "from the Inside Out"

A few reasons underlie the popular adoption of MBPs to foster student well-being in schools. First, MBP is a well-being approach with the potential to enhance all aspects of self-regulation—cognitive, emotional, and behavioral—at the same time, and is one of the few, if not only, well-being approaches that also strengthens EF and attention. For the first time, instead of just demanding that students pay attention in class, schools are able to teach children *how* to pay attention, and "how to stop their mind wandering and regulate attention and emotions, to deal with feelings of frustration, and to self-motivate" (Zenner et al., 2014; p. 2). Second, the "learning" in mindfulness is largely experiential and developed implicitly through mindfulness-based activities. Hence, little material needs to be learnt. It has been called an approach that teaches "from the inside out", focusing on the self-awareness and self-management that arise from enhancing internal attentional self-regulation, rather than the "outside in" approach in many SEL and Positive Interventions and Support programs (Semple et al., 2017). This aspect of MBP may be especially welcomed given the amount of skills and knowledge that students already need to learn "from the outside in".

As indicated by the new-wave programs integrating MBP with SEL or PP, skills and knowledge learnt "from the outside in" and "from the inside out" are complementary in promoting social-emotional competence and well-being. For instance, though mindfulness enables a pause between stimulus and reactivity, which allows for more appropriate responding, one may not know what the appropriate response should be. Prosocial skills learnt in SEL, for example, can then come in. Conversely, one may have the full repertoire of appropriate responses for intra- and inter-personal management but lack the awareness to realize when they are required, or the "space" to inhibit inappropriate reflexive responding so as to execute appropriate ones. Self-regulation involves the self-monitoring and self-awareness of (i.e., paying attention to) a need for regulation; likewise, compassion towards the self or others first requires attending to or being aware of the presence of a need for compassion. One competency children develop in MBP is to notice and recognize physiological sensations associated with emotional responses, such as anxiety, stress, or anger. In addition to reduced physiological reactivity to such stressors over time, children can more directly recognize the need to manage their emotions as they arise, and find the pause that allows them to apply appropriate strategies.

Mindfulness in Asian Schools

The adoption of MBP in K-12 schools in Asia seems less widespread than in the West. In Maynard et al.'s (2017) review on the effects of mindfulness-based interventions for primary and secondary school students, only 5% of the studies were from Asia. However, though only two studies fell within the inclusion criteria in Maynard et al. (2017), the extent of adoption in Asian schools is slightly wider.

Notable Asian countries that have published research findings on MBPs in K-12 school settings include Hong Kong (e.g., Lam & Seiden, 2019), Korea (Kim

et al., 2019), Thailand (Siripornpanich et al., 2018), Vietnam (Le & Trieu, 2016), Indonesia (Dewi et al., 2015), and India (e.g., Anand & Sharma, 2014). In Singapore, several schools have reportedly adopted MBPs; some as part of SEL or PP programs. Some schools report integrating single practices, such as mindful breathing, into daily school routines—for example, to let students settle down after recess. Schools adopting full MBPs have mainly used "gold-standard" programs from the US and UK, such as Mindful Schools and ".b". One school reported using the ".b" program for all their students; one study reported a controlled trial of the Mindful Schools curriculum with at-risk adolescents. Feedback collected from the above two implementations suggested that though reception and engagement with the MBPs varied across students, they were generally positively received from at least most of the participants, with some students reporting finding the techniques learnt useful for helping with emotional and/or attentional regulation. The Mindful Schools study also gathered feedback from the intervention classes' main teachers who reported observing improvements in students' self-awareness, attentional and behavior regulation, and interpersonal well-being in a substantial proportion of the intervention students. Spillover benefits for the teachers included better teacher-student interactions and gaining extra teaching time (from students' improved ability to settle down) (see Khng, 2018).

The "success" of the MBPs in terms of student engagement and benefits can vary across students, and not all may take to the practices. The Singapore Mindful Schools study shared similarities with what was observed in the Hong Kong studies (e.g., Lam & Seiden, 2019) in terms of attendance, engagement and reception by academically poor or at-risk students. In general, approximately half the students would show interest and be consistent in attendance; those who do are more engaged and found the techniques useful for helping with attentional or emotional regulation and well-being; different students favor different MBPs, though more "active" practices such as mindful eating tend to be popular; commitment and effort to practice regularly can be challenging. Suggestions to enhance the appeal of MBPs to students include shorter, more varied and less "passive" or static practices, more use of metaphors, interpersonal rapport, small class sizes and conducive environments (Lam et al., 2015). Cultural alignment also helps: Le and Trieu (2016) attributes the success of their MBP implementation with Vietnamese youths partly to the reason that the principles of mindfulness are already implicit in some aspects of traditional Vietnamese culture. This enabled the facilitators to use stories, folklore or proverbs that were familiar and relatable to the students to illustrate ideas and concepts. Participation by subscription instead of conscription might have also helped. It is likely an issue of universal school-based programs (not limited to MBPs) that not all students will like or benefit (or to the same extent) from one single approach. It may thus be necessary to introduce to students various tools or approaches to enhance self-regulation and well-being so they may use what works best for them. The evidence thus far strongly suggests that MBP is one of them.

The fledgling state of mindfulness in schools in Asia may come across as surprising since MBPs have their roots in Eastern practices. From the limited mindfulness-in-schools literature from Asia, it appears MBPs may be better accepted

and received in some Asian societies than others—for instance, Vietnam and Thailand, where the traditional culture is more aligned with the historical roots of mindfulness practice. Although contemporary MBSR-based MBPs are secular and independent of religious values or beliefs (see Brensilver, 2016, for a discussion), concerns regarding secularity remain a barrier to more widespread implementation in schools in parts of the world. Other barriers include a lack of awareness or understanding of MBPs in stakeholders, the resource commitment required from schools to build capacity and to set aside the time and space for implementation, and issues related to student interest and engagement—though this can be countered with a school-wide implementation approach, as some have done, including schools in Singapore (see Khng, 2018).

Deep Breathing for Emotion-Cognitive Self-regulation and Well-Being

A related evidence-based technique that can easily be added to students' toolbox for cognitive-emotional self-regulation and well-being is simple deep breathing. Unlike in mindful breathing, where instructions are focused on how attention is being paid to sensations of the breath, and simply noticing what is occurring without doing anything to change how one is breathing, deep breathing involves instructions on directing the breath but not on managing how attention is being paid, including to any arising thoughts or emotions. Thus, the two techniques are very different in terms of orientation and primary targeted mechanism. Mindful breathing acts via cognitive control and attention regulation while simple deep breathing acts via direct physiological regulation.

In deep breathing, one takes slow, gentle breaths deep into the belly—also known as abdominal breathing, belly breathing or diaphragmatic breathing. This is in contrast to chest or thoracic breathing, where the breath is taken shallowly into the chest. Breathing patterns are closely tied to emotional and autonomic arousal states. Unpleasant emotionality, stress, anxiety, fear, agression, and tension are typically accompanied by the rapid, shallow, thoracic breathing associated with the fight-or-flight response; pleasant affect and relaxation tend to be associated with slow, deep, abdominal breathing (Boiten et al., 1994). By changing or regulating respiratory patterns, emotional states can also be regulated. Our emotional states can affect our cognitive states or our ability to function cognitively. For example, it is well known that even high ability students can "choke under pressure" (Baumeister, 1984). Test anxiety is a prevalent problem affecting the cognitive (e.g., underperformance) and emotional (e.g., stress/distress, anxiety, depression) well-being of students of all ages and abilities (von der Embse et al., 2018).

As previously described, self-regulation involves the balance between top-down cognitive control and bottom-up, stimulus-driven arousal. Top-down cognitive control interacts with bottom-up activity from attention, emotion, and stress

response systems in a feedback loop system such that bottom-up arousal also affects EF and cognitive processes (Blair, 2016). Similar to the well-known inverted U-shape Yerkes-Dodson effect (Yerkes & Dodson, 1908), while some level of arousal can facilitate cognitive functioning, overly high (or low) levels of arousal can impair functioning (Blair, 2016). Regulating one's emotional arousal state (and well-being) can thus impact their cognitive state and performance.

A Better State-of-Mind: Deep Breathing Reduces Anxiety and Improves Performance

Simply deep breathing has been demonstrated to effectively enhance cognitive and emotional well-being in students. In a pretest–posttest controlled trial, Khng (2018) taught Primary 5 students (~5th graders) in Singapore to take slow, deep abdominal breaths while they sat for a timed math test under evaluative (i.e., test-anxiety inducing) conditions. Compared to the control group of students, students who practiced the deep breathing showed a significantly greater reduction in self-ratings of state anxiety at the start of the test and greater improvement in math test scores. Mediation analysis showed that deep breathing enhanced emotional well-being (i.e., reduced anxiety), leading to better cognitive well-being (i.e., state-of-mind) during the test, in turn leading to better test performance.

Breathing techniques have long been used in interventions or therapies, particularly in the treatment of anxiety-related issues. However, the efficacy of deep breathing as a standalone technique for emotional and cognitive self-regulation has not often been examined. Khng's (2018) findings are consistent with studies that found breathing techniques to improve aspects of emotional regulation and well-being and task performance (e.g., Brunyé et al., 2013). Khng's (2018) findings also support the aforementioned bidirectional psychobiological model of self-regulation (Blair, 2016): simply regulating one's breathing (physiological state) can have direct effects on regulating one's emotional state, and through that regulate cognitive state and performance.

Teaching Students Deep Breathing in Schools

Deep breathing is a simple technique that circumvents most of the previously discussed barriers to implementing school-based MBPs and can be easily incorporated into school curricula in a fuss-free manner. Schools can teach students to simply take deep breaths when they need to calm down and/or focus, such as in times of anxiety, anger, or other states of emotional and physiological arousal. Though the effect sizes of simply taking a few deep breaths may be, expectedly, in the small range (Khng, 2018), it is a simple and quick supplementary technique that schools can easily teach to help enhance children's well-being with minimal resource commitment. Taking deep breaths is also universal and naturalistic, with no affiliation to particular traditions and is unlikely to encounter resistance on that

front. Once learnt, it becomes an accessible coping tool for children to apply in a self-directed manner, for immediate effect.

On the other hand, though deep breathing can be a standalone coping strategy, its effects are more transitory (i.e., state-like) and limited in scope compared to the wider-ranging, longer-term and more stable (i.e., trait/dispositional-like) effects of MBP. Mindfulness awareness can also help children monitor their autonomic arousal states and identify when to apply the deep breathing technique. Khng (2018) found that deep breathing may be especially helpful in enhancing performance for children prone to autonomic manifestations of test anxiety (e.g., "my heart beats fast" when taking tests). The ability to notice changes in bodily sensations, as trained in MBP could facilitate children using the technique in a self-directed manner. Some evidence also suggest it may be particularly useful for boys to learn how to use deep breathing to regulate their emotional states (Khng, 2018). In Singapore, some schools have reportedly incorporated deep breathing into their school routines (see Khng, 2018). Future research could examine the effects of such implementations.

Conclusions

Stressors are inevitable in life. The ability to cope and self-regulate in the face of stressors is a critical skill that enables individuals to survive and to thrive and flourish. This chapter presented two techniques aligned with Seligman's (2002) three pillars of PP that schools can use to help children develop these skills. Mindfulness and deep breathing techniques focus on expanding and enhancing children's inner capacities for self-regulation and are complementary to other SEL and PP techniques. Deep breathing is simple and accessible and can contribute towards students' positive subjective experiences/states and well-being; MBP, though more complex for school implementations, can additionally contribute towards students' positive personality traits, and positive institutions and communities.

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Part IV
Cultural Perspectives on Flourishing and Well-Being

Chapter 18
Cultural Issues in Measuring Flourishing of Adolescents

Kah Loong Chue

Abstract The positive psychology movement has led to an increasing number of individuals, organizations and countries to recognize the importance of supporting and promoting the state of wellbeing in adolescents. To achieve this goal, it is necessary to have a valid and reliable measurement of wellbeing. Several instruments have been developed for this purpose, each differing on the number and type of domains. However, many of these instruments were developed in western societies and therefore, highly dependent on the needs and priorities of these cultures. These instruments may or may not be relevant in the Asian context. Using Hofstede' proposed cultural dimensions, which include Power Distance, Uncertainty Avoidance, Individualism/Collectivism, Masculinity/Femininity, Long/Short Term Orientation and Indulgence/Restraint, this chapter will examine the various types of instruments that were designed to measure wellbeing in adolescents and their validity in Asian societies. The review suggests that more evidence-based evaluations of measurement tools are required to ensure that the instruments are well-suited for the different socio-cultural contexts.

Practitioner Points

- Currently, there are three comprehensive instruments of flourishing that have been validated and used for adolescents: the PERMA-Profiler, the EPOCH and the Flourishing Scale with the Scale of Positive and Negative Experience.
- After examining the three instruments with respect to Hofstede's cultural dimensions, we assert that different cultures emphasize different dimensions of flourishing to varying degrees.
- To adapt the instruments to local cultures, it may be necessary to consider the cultural orientations of the sample to determine the importance of the dimensions of flourishing to be measured.

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Supporting and promoting wellbeing in adolescents have become increasingly important due to the recent emergence of the positive psychology movement. Many schools have implemented programs focusing on positive education, which is essentially the application of positive psychology principles to education, to improve students' wellbeing. Naturally, there would be interest in evaluating the level of success of these programs. This, in turn, requires a valid and reliable measurement of adolescent wellbeing within the confines of positive psychology. However, many of the current measures are developed and validated in western, educated, industrialized, rich, democratic (WEIRD) countries. Are these measures applicable to Asian countries? What are some cultural factors to consider when adapting these measures to the local setting? This chapter will delve into the above questions by examining three instruments that measure positive wellbeing in adolescents, namely, the PERMA-profiler (Butler & Kern, 2016), the EPOCH measure (Kern et al., 2016) and the Flourishing Scale with the Scale of Positive and Negative Experience (Diener et al., 2010). It will be followed by an analysis of these instruments in relation to the cultural dimensions proposed by Hofstede (2011).

Measuring Flourishing

Flourishing is usually touted as the ultimate goal of positive psychology. It means perceptions of feeling good and effective functioning and is synonymous with high mental wellbeing (Huppert & So, 2009). An individual who is flourishing tends to have strong social support systems, enjoy better physical health and have a higher overall work quality (Diener & Ryan, 2009). An adolescent who is flourishing tends to enjoy higher academic success, learn better, and have less behavioural issues (Seligman et al., 2009; Waters, 2011). A finer definition of flourishing relates to the philosophical traditions of hedonic and eudaimonic wellbeing. The hedonic tradition emphasizes pleasant emotional experiences as pathways to higher wellbeing. A prominent model that aligns with this tradition comprises the presence of positive affect, the absence of negative affect and an indication of life satisfaction (Diener, 1984). Alternatively, the eudaimonic tradition accentuates optimal functioning and fulfilling one's potential. Eudaimonic models tend to focus on several life domains as it includes various perspectives that relate to positive psychological functioning. For example, Ryff (1989) argues that eudaimonic wellbeing can be understood in terms of six domains, namely self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life and personal growth (Ryff, 1989). In sum, a flourishing person can be construed as one with high levels of hedonia and eudaimonia (Schotanus-Dijkstra et al., 2016).

Whilst the definition of flourishing is relatively straightforward, several researchers have disagreed on its operationalization. Using keyword searches in psychological and social science databases, Hone et al. (2014) identified four different models in which flourishing was interpreted. Although there were some conceptual overlaps across the four models, such as the presence of positive relations, meaning

and purpose, the authors concluded that the only agreement between researchers appear to be that flourishing is a multi-dimensional construct that corresponds to higher wellbeing (Hone et al., 2014). Similarly, when Witten et al. (2019) conducted a systematic review on adolescent flourishing, they found that there was no single operationalization of adolescent flourishing in the research literature. Furthermore, although many studies used a combination of instruments to explore the multiple facets of flourishing, this may inadvertently create a possible misalignment to the construct of flourishing (Witten et al., 2019). As an example, one of the studies examined in the review used three scales: The Adolescent Self Control Scale, Child and Adolescent Social Support Scale and PANAS-Children, to describe mechanisms behind flourishing in Israeli adolescents. In doing so, the study focused exclusively on emotions and relationships. Many other dimensions such as purpose and engagement were ignored, possibly rendering the study "incomplete".

Given the multitude of instruments that purport to measure aspects of wellbeing (Cooke et al., 2016 identified 42 such instruments in literature), it would be an arduous task to analyse the different combinations of instruments that operationalize flourishing. As such, the focus of this review will be on three comprehensive questionnaires that (i) combine both aspects of hedonic and eudaimonic approaches, and (ii) have been used to measure flourishing in adolescents. The instruments are the PERMA-profiler (Butler & Kern, 2016), the EPOCH measure (Kern et al., 2016) and the Flourishing scale with the Scale of Positive and Negative Experience (Diener et al., 2010).

PERMA-Profiler

The PERMA-Profiler was developed to assess the key elements of wellbeing as suggested by the PERMA model of wellbeing that was conceptualized by Seligman (2011). The PERMA model operationalizes flourishing in terms of five elements that are exclusive to each other, namely **positive emotions, engagement, positive relationships, meaning and accomplishment** (Seligman, 2011). Positive emotions deal with what we feel, such as pleasure, contentment, or warmth. Engagement refers to the ability to live life with the ability to "flow" or to become absorbed in activities. Positive relationships are characterized by interactions and relations with other people. Meaning refers to the sense of having a direction in life, a connection to something larger than the self, and a purposeful life. Accomplishment involves a sense of achievement and of pursuing and reaching one's goals.

Whilst developing the PERMA-Profiler, the researchers attempted to balance the ability to capture each component of wellbeing with the brevity of the questionnaire. Hence, their aim was to restrict the number of items for each domain to three, and at the same time, retain the acceptable psychometric properties of the instrument. As such, an initial item bank of over 700 items were reduced to 15 items through theoretical and empirical analysis. Items were rated on an eleven-point Likert scale, with 0 indicating extremely low levels and 10 indicating extremely high levels of

wellbeing. These items were further tested with two samples of adults and were shown to demonstrate adequate psychometric properties. Subsequently, the instrument was refined based on qualitative feedback and comments from participants. Some items were reworded and eight additional items were included that measure overall wellbeing, negative emotions, loneliness and physical health. Nonetheless, scores for each PERMA domain are created by taking the average of the three items whilst overall wellbeing scores are computed based on the average of the 15 PERMA items and the overall happiness items. The dimensions and some sample items of the PERMA profiler are given in Table 18.1.

The PERMA profiler has been independently validated in several countries including Turkey (Ayse, 2018), Italy (Giangrasso, 2018) and Greece (Pezirkianidis et al., 2019). However, a cross-cultural comparison of the PERMA profiler conducted in Malaysia indicated that a three-factor model was a better fit to the data than the proposed five factors (Khaw & Kern, 2014). An additional free response item revealed that there was a heavy emphasis on the Relationship component and the prominent presence of other distinct wellbeing constructs, such as religion and health. It was also noted that the well-being scores of participants from Malaysia were lower than those of the participants from the United States. The authors suggested that these scores may not be comparable due to the reliance on individual experiences or cultural norms to make judgements (Khaw & Kern, 2014).

Burke and Minton (2019) have used the PERMA profiler to examine age and gender differences in adolescents' wellbeing in Ireland. They concluded that wellbeing, as measured by the individual PERMA components, decreased steadily from the junior years (12–13 years) through to the middle years (14–16 years) and senior years (17–19 years). It was suggested that the cause of this decline may be due to academic pressure from stressful, high-stakes examinations. Furthermore, males reported a higher level of wellbeing compared to females except for the component on positive relationships, where there was no statistical difference in scores between gender groups. The researchers attributed this to the increased sensitivity of females to cultural expectations of gender norms (Burke & Minton, 2019).

Table 18.1 Dimensions and sample items from the PERMA profiler

Component	Items
Positive emotions	In general, how often do you feel joyful?
Engagement	How often do you become absorbed in what you are doing?
Relationships	To what extent do you receive help and support from others when you need it?
Meaning	In general, to what extent do you lead a purposeful and meaningful life?
Accomplishment	How much of the time do you feel you are making progress towards accomplishing your goals?
Overall wellbeing (happiness)	Taking all things together, how happy would you say you are?

EPOCH

The EPOCH was developed by Kern et al. (2016) based on the belief that flourishing in adults can be fostered through nurturing positive characteristics, attitudes and behaviors in adolescents. The EPOCH includes five biopsychosocial domains that can lead to flourishing, namely Engagement, Perseverance, Optimism, Connectedness, and Happiness (Kern et al., 2016). Three of the domains are similar to the PERMA model—Engagement refers to the capacity to be absorbed in and focused on activities; Connectedness refers to the sense of satisfying interactions and relations with other people; and Happiness is characterized by steady states of positive emotions. Perseverance exemplifies the ability to surmount obstacles in order to complete one's goals. Optimism is characterized by feelings of hopefulness coupled with a tendency to view things favorably.

The researchers developed the EPOCH items and validated the resulting instrument in ten samples of adolescents based in the United States or Australia. They began with a pool of 575 items that were first reduced to 60 items through a qualitative process, further reduced to 25 items in the second stage, and finally refined to 20 items in the last stage (through a statistical analysis across several samples). The 20-item questionnaire, with four items per domain, was finalized after a further test across four different samples demonstrated adequate psychometric properties. Each domain score is computed by taking the average of indicator items and an overall psychosocial function score can be computed by taking the average of the domain scores. Items were rated on a Likert scale, ranging from 1 (Not at all like me) to 5 (Very much like me). Based on the number of points, the researchers observed some evidence of a ceiling effect in the Happiness and Connectedness domains. Nevertheless, the scale was kept unchanged as it was argued that a five-point scale was typical of adolescent measures, and that there were no differences in the response structures of a 4, 5, 6 or 11-point scale (Leung, 2011). The dimensions and some sample items of the EPOCH measure are given in Table 18.2.

Kern et al. (2016) recommend that the EPOCH instrument be used solely as a descriptive or evaluative measure. Its ability to compare adolescents across different cultures was examined in a recent study conducted in China. Kern et al. (2018) translated and then back-translated the items into Chinese before administering the

Table 18.2 Dimensions and sample items from the EPOCH measure

Component	Items
Engagement	I get completely absorbed in what I am doing
Perseverance	I finish whatever I begin
Optimism	I am optimistic about my future
Connectedness	When something good happens to me, I have people in my life that I like to share the good news with
Happiness	I have a lot of fun

questionnaire to students in three schools across different cities in China. The data obtained were analysed with comparable U.S. and Australian samples from the original validation study. Results indicated that the model was invariant across gender (males vs females) and age (pre-teens vs teens). Whilst the structure of the model was invariant cross-culturally (i.e., associations with other variables can be examined across cultures), the intercepts were not invariant across cultures (i.e., the mean scores between China and the western samples were not directly comparable). This implies that any comparisons made based on the average of the items may not be a valid representation of wellbeing differences. The researchers noted that these could be due to cross-cultural differences in acquiescence response style, social desirability biases, reference group effects, or various other reasons (Kern et al., 2018).

Flourishing Scale

The most widely used scale that measures flourishing is Diener's Flourishing scale developed by Diener et al. (2010). Instead of deconstructing flourishing into various dimensions, the scale is framed as a holistic instrument underpinned by contemporary theories of wellbeing. There are only eight items in the scale but the authors of the scale claim that such items can assess major aspects of social-psychological function, such as engagement, social relations, optimism, respect, a sense of competence and meaning in life. Each item was rated on a Likert scale that ranges from 1 (Strong Disagreement) to 7 (Strong Agreement). The sum total of all the responses is taken as a measure of overall wellbeing in individuals and higher scores signify a greater level of subjective wellbeing. When tested across six diverse samples of undergraduate students, the scale demonstrated good psychometric properties throughout. Furthermore, factor analysis of the scale indicated that all the items characterize a single common factor, thereby adding weight to the argument that the scale measures an overall state of wellbeing. The researchers noted that the scale was meant to provide an overview of positive functioning, and not to assess individual facets (Diener et al., 2010). Sample items from the scale include "I lead a purposeful and meaningful life" and "My social relationships are supportive and rewarding".

The Flourishing Scale is usually complemented by the Scale of Positive and Negative Experiences (SPANE; Diener et al., 2010) as SPANE was meant to assess the hedonic, or emotional, aspects of flourishing. It requires respondents to reflect on their emotional levels in the past four weeks and indicate the frequencies in which they experience six positive (positive, good, pleasant, happy, joyful, and contented) and six negative (negative, bad, unpleasant, sad, afraid and angry) emotions. Each item was rated on a Likert scale that ranges from 1 (Very rarely or never) to 5 (Very often or always). The positive and negative scales can be scored separately. At the same time, the two scores can be combined by subtracting the negative emotion score from the positive emotion scale. The combined scores range from −24 to 24. The researchers noted that SPANE should perform well across societies (Diener

et al., 2010). However, whilst norms for the samples were computed, there was no indication on the correspondence between levels of wellbeing and the SPANE scores.

The main appeal of the Flourishing Scale and SPANE lies in their brevity and the ability to aggregate multiple wellbeing dimensions into one measure. Both scales have been independently validated in in eastern and western societies (e.g., Didino et al., 2019; Sumi, 2014), with adults and adolescents (Duan & Xie, 2019; Singh et al., 2016) as well as with different socio-economic segments of society (Li et al., 2013). Whilst most of the validation studies focused on establishing construct validity, (i.e., whether the items constitute one single factor in the flourishing scale and computing the correlations of their scores with other established measures), the issue of content validity was largely ignored. Content validity may be important as several social-psychological functions are represented solely by one item each. Indeed, Hone et al. (2014) states that "it is essential to be confident that what the investigator is measuring corresponds with the concept of flourishing in the mind of participants" (p. 72). It is vital to investigate whether there exists an alignment between concepts of flourishing as elucidated in the instruments and the different contexts in which they are applied.

Cultural Influences on Assessing Well-Being and Flourishing

One of the persistent issues with aligning conceptual measurements and contexts has to do with the systematic biases caused by cultural norms. Care must be taken when applying instruments to different societies as the manner in which individuals interpret the various aspects of flourishing may not be same. For example, in western eudaimonism, the notion of individual mastery over the environment is celebrated whereas in eastern eudaimonism, achieving harmony with the environment is prioritized (Joshanloo, 2014). These differences are heightened during the period of adolescence. Adolescents are acutely aware of cultural norms, being the recipients of one's culture since young. Thus, any variations in wellbeing due to these cultural differences are more likely to be keenly felt. Expanding on the example above, adolescents in western contexts may experience higher wellbeing when they outperform others whereas adolescents in eastern contexts experience higher wellbeing when they cooperate with each other. This may not be true in adults who are sufficiently mature to recognize context dependency.

For an instrument to be useful cross-culturally, it is essential that participants from different cultural environments interpret the construct in the same manner. Otherwise, conclusions drawn may be misleading. For instance, in one particular study that used Diener's Flourishing scale, Sumi (2014) concluded that wellbeing in Japan tends to be lower than that of other countries due to socio-economic and cultural differences. One of these cultural differences may have surfaced in the interpretation of the construct. As an example, whilst the scale uses optimism as a facet of flourishing, hopefulness about the future may not be as important to the Japanese as certainty about the future, (e.g., "I am certain about my future"). This can be due to the claim that the Japanese tend to have a high need to maximize predictability so that they can

plan ahead, reduce anxiety and stress (Hofstede, 2019). Certainly, a more evidence-based approach is required before adapting questionnaires created in the western cultures to Asian societies.

How does the culture of different countries vary such that they require different operationalizations of flourishing to measure wellbeing? Hofstede (2011) describes six dimensions of national culture based on empirical data and decades of refinement: (i) Power Distance—the acceptance and expectance of power distribution within institutions; (ii) Uncertainty Avoidance—the amount of tolerance for ambiguity; (iii) Individualism/Collectivism—the degree in which people are integrated into groups; (iv) Masculinity/Femininity—the extent in which assertiveness or caring is dominant in a society; (v) Long/Short Term Orientation—the extent in which tradition is preserved; and (vi) Indulgence/Restraint—the extent in which people control their desires and impulses (Hofstede, 2011). Although these cultural dimensions depend on aggregated samples, it has been shown that they can be extended to the individual level (Taras et al., 2010). Consequently, the notion of wellbeing in individuals are likely to depend on the characteristics of some of these dimensions. The next section will discuss four of these six dimensions in relation to flourishing facets and measurements.

Individualism Versus Collectivism

Individualistic and collectivistic societies can be represented by the words "I" and "We", respectively. In an individualistic society, the ties between people are loose. Individuals are supposed to look after themselves and their immediate family only. Organizations and institutions are more task-orientated than relation-orientated (Hofstede, 2011). Conversely, in a collectivistic society, people are assimilated into strong cohesive groups from a young age. Maintaining harmony within groups is vital. Organizations and institutions are more relation- orientated than task-orientated (Hofstede, 2011). In the index scores presented by Hofstede (2019), individualism is high in the United States whereas collectivism is high in Singapore and Malaysia.

The perception that social relationships promote adolescent flourishing may be moderated by the level of individualism/collectivism in society. Adolescents in an individualistic society may ascribe less importance to social aspects (e.g., social support, social contributions) as a facet of wellbeing because they are expected to be self-reliant (Green et al., 2005). Children at an early age are instilled with the notion that personal fulfilment is the key to happiness which may be different when compared to adolescents in a collectivistic society. Schools may prioritize personal goals over group goals and deem the students responsible for their own work (Cortina et al., 2017). On the other hand, adolescents in a collectivistic society may enjoy a high level of support in schools as a larger group comprising of family, teachers and classmates; these adolescents are expected to assume a large share of responsibility for their work (Cortina et al., 2017). Schools may also actively foster a sense of belongingness through a variety of means, such as school uniforms, school anthems,

alumni, etc. Many school programs would have aims of social contribution, such as helping less fortunate people. To adolescents brought up in collectivistic societies, harmonious social relations may be core to school life. It may not be as important for adolescents at the other end of the spectrum of individualism/collectivism.

Masculinity Versus Femininity

Masculine societies are driven mainly by competition and achievement whereas feminine societies are concerned with modesty, care and cooperation. In a masculine society, successful people are seen as assertive and ambitious. People want to be the best in their fields and work is often prioritized over family. Rewards are usually material in nature (Steel et al., 2018). On the other hand, in a feminine society, people tend to value quality of life and a good balance between family and work. These value systems start in schools and continue throughout life (Hofstede, 2011). In the index scores presented by Hofstede (2019), masculinity is high in Japan, middling in United States and Singapore, and low in Thailand.

The perception that a sense of accomplishment promotes adolescent flourishing may be moderated by the level of masculinity/femininity in society (Steel et al., 2018). Adolescents in a masculine society may attach more importance to accomplishments (e.g., achieving goals, making progress) as a facet of wellbeing when compared to adolescents in a feminine society (Hofstede, 2019). In masculine societies, academic grades may be emphasized and entrance to renowned educational institutions may often be seen as a source of pride. Family time may also be sacrificed for supplementary classes that would provide an increased chance of academic success. A hierarchical structure is also likely to be present in schools, whereby students placed in leadership positions may be viewed with strong admiration. Conversely, adolescents in a feminine society tend to value quality of life over the need to produce accomplishments. Incentives such as flexibility and free time are usually preferred over the need to succeed (Hofstede, 2019). As such, a good balance between school and personal time may be deemed more important than the satisfaction of academic demands. Similar to the theme in individualistic/collectivistic societies, a sense of accomplishment may be core to wellbeing for adolescents brought up in highly masculine societies and peripheral to adolescents brought up in highly feminine societies.

Long-Term Versus Short-Term Orientation

Cultures with a long-term orientation prefer to solve challenges in the present and prepare for the future. Adaptation is a key trait to possess, that is, individuals should have the ability to adapt to moving circumstances and traditions have to be adapted to modern times. Economic investment is usually in areas that deliver slow but critical

leverage, such as education (Hofstede, 2019). Cultures with a short-term orientation have a tendency to maintain established norms and are suspicious of any societal change. Organizations generally strive for quick results (Hofstede, 2019). In the index scores presented by Hofstede (2019), the level of orientation in the United States is extremely short term, whereas the levels of orientation in Singapore and Japan are long term.

With regard to long-term/short-term orientation, the issue with using survey instruments to measure flourishing is methodological and relates mainly to the hedonic component of positive emotions. Most questionnaires expect a time referent response from participants on the frequency in which they experience happiness, enjoyment, and so on. The PERMA Profiler phrases the items on positive emotions in terms of a generic frequency and response options are indicated on a 11-point scale. SPANE requires participants to reflect solely on the past four weeks and indicate the frequency in which they experience both positive and negative emotions on a 5-point scale. In cultures with a short-term orientation, this might be appropriate for adolescents as investments in education are relatively fewer and there is a shorter period of adaptation. However, in cultures with a long-term orientation where there are constant investments in education, adolescents typically take time to adapt to these changes. In the process of adaptation, they are more likely to experience negative emotions such as anxiety or frustration. Even though the end result could be a happier environment, thus higher wellbeing, adolescents are likely to score lower on the items in the questionnaires. Thus, although questionnaires provide valid results at a specific moment in time, they may not give an accurate portrayal of the overall state of flourishing in the population.

Indulgence Versus Restraint

The extent in which desires and impulses are controlled matters most in the nurturing of children. An indulgent society "allows relatively free gratification of basic and natural human desires related to enjoying life and having fun" whilst a restrained society "controls gratification of needs and regulates it by means of strict social norms" (Hofstede, 2011, p. 15). In the index scores presented by Hofstede (2019), indulgence is high in United States, middling in Singapore, and low in China.

Similar to long-term/short-term orientation, the main issue with indulgence/restraint is methodological and pertains to the accuracy of measurements. In indulgent cultures, people are more likely to declare themselves happy or having fun. They are also more likely to declare themselves so engaged that they "lose track of time". In a restrained culture, people may tend to view having too much happiness or fun as detrimental to themselves. They may be more susceptible to a social desirability bias in which people in this group respond differently to the items in the questionnaires because of what is expected of them from social norms (Dursun et al., 2019). For instance, adolescents in different cultures may have played the same video game for the past week. Whilst the adolescents in the indulgent culture may have no qualms

about expressing their happiness over the past week, adolescents in the restrained culture may feel that they should have been studying instead of playing—they may indicate that they are not too happy about "wasting" their time on video games.

Whilst the above discussion proposes several ways that culture impacts on well-being measures, it is in no way exhaustive. As Hofstede (2019) noted, combinations of the degrees in the various dimensions produce different effects. For example, a high level of collectivism coupled with a high level of masculinity is reflected in the society as competition between groups, rather than individuals. This begs the question: How can one accurately determine the constituents of optimal functioning if every culture is unique? In their study conducted in Europe, Huppert and So (2009) could not pinpoint the exact constituents of flourishing as well. When they used data solely from a UK sample, respondents perceived that flourishing included between three to six dimensions with almost equal proportions. They finally decided that, for an individual to be classified as flourishing, he or she would need to endorse a set of three core features (positive emotions, engagement, meaning) and a further additional three features out of six (self-esteem, optimism, resilience, vitality, self-determination, positive relationships) (Huppert & So, 2009). The researchers may be on the right track.

As perceptions of optimal functioning differ across cultures, it may be pointless to dictate a set of universal facets in which all individuals believe. To truly assess flourishing in a specific cultural context, it may be necessary to consider the orientations of the culture first. Interviews and discussions should be conducted with relevant people before determining what needs to be measured to give a "flourishing score". Other researchers have also provided justifications to consider cultural orientations, for instance, the importance society attaches to negative emotions (Lomas & Ivtzan, 2016) or harmony (Uchida & Ogihara, 2012). Consequently, whilst questionnaires that assess several dimensions would indicate in which aspects of flourishing a particular group is high or low, it may be inappropriate to assign an overall score of flourishing or to compare total scores of flourishing across cultures.

On a methodological note, administering questionnaires may not be the best method to measure flourishing. First, items in the questionnaires usually require participants to reconstruct their experiences over a certain time span. However, emotions are fleeting and might not be easily compared in terms of frequency. Imagine a group of individuals (in a long-term orientation culture) who work on a student project together. After a few months of frustration, anxiety and bouts of unpleasant emotions, they learn that their project is successful, earning them accolades and opportunities. How do we compare the months of negative emotions to that single moment of euphoria? How should we quantify their wellbeing? Second, systematic biases across cultures are naturally inherent in completing surveys. This is in line with a growing number of studies that indicate relationships between cultural values and wellbeing (e.g., Steel et al., 2018). To overcome these concerns and increase the validity of findings, it may be necessary to administer questionnaires multiple times to establish wellbeing patterns of individuals. Alternatively, other modes of measurement, such as the monitoring of physiological functions may serve as potentially useful alternatives, albeit more logistically challenging.

Conclusion and Implications

Positive psychology has certainly made an impact in the education sector. Like all other initiatives, its adoption will depend on the success and effectiveness of related programs that require the use of valid and rigorous measures. This chapter examines three popular instruments that measure flourishing and then drew some links with Hofstede's cultural dimensions. It is argued that there are inherent cultural biases within the various facets of flourishing, such as the importance attached to relationships and sense of accomplishment between individualistic/collectivistic and masculine/feminine societies, respectively. Furthermore, some of these cultural biases may lead to methodological issues. For instance, the use of time-based questionnaires may not give an accurate portrayal of wellbeing differences between societies with a long-term/short-term orientation and social desirability bias may vary between indulgent/restrained societies. The implications are clear. Prior to adapting measures that have been established in western environments, Asian countries may do better if they take into consideration the traditional beliefs and expectations that are embedded in their respective cultures. This article is a preliminary step to articulating possible issues and factors that might influence the adoption and interpretation of current measures of flourishing. The next stage would be to test these ideas empirically within the Asian societies.

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Chapter 19
Culture, Individual Difference, and Student Well-Being: Embracing Diversity for Cultivating Resilience

Chieko Kibe

Abstract One of the primary objectives of positive education is to emphasize and enhance students' well-being. Supported by the findings from positive psychology, the factors that contribute to individual well-being have been investigated in various educational settings through psychoeducational interventions. Although previous research has discovered their effectiveness, such interventions were mostly developed in western countries; hence, their applicability and feasibility in the non-Western context require careful examination. Moreover, the individual differences, which could potentially moderate intervention outcomes, also require investigation, since such factors may mask the baseline differences and thus affect the efficacy of the programs. This chapter initially includes a review of the development and current initiatives of positive education and then discusses the need for the consideration of cultural and individual differences toward its effective implementation. Subsequently, an empirical study is presented as an example of culturally modified positive education in the Japanese context and discussed from differential susceptibility perspectives.

Keywords Positive education · Cultural modification · Individual difference · Resilience education · Differential susceptibility

Practitioner Points

- When implementing a Western-born program in Asian contexts, facilitators should be aware that factors contributing to youth well-being in collectivistic cultures can differ from those of individualistic cultures.

Portions of this chapter include a summary of the author's study published from *PLOS One* in 2020 as a case study. The author has no conflict of interest to disclose.

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- To optimize intervention efficacy, specific and contextualized goal setting is to be made, and curriculum development (or modification) should be considered to meet those needs. A whole-school approach that involves multiple stakeholders' commitment is recommended.
- To cultivate students' resilience, interventions employing a universal approach provide valuable opportunities, yet program benefits can vary depending on individual differences.

There has been a notable development in positive psychology over the last two decades that aims to study "what makes life worth living" from individual to societal levels (Seligman & Csikszentmihalyi, 2000, p. 13). Moreover, its application has expanded remarkably. One such example is in the field of positive education. Underpinned by empirical findings of positive psychology, positive education seeks avenues to emphasize student well-being. That is, while valuing the philosophy and pedagogy of traditional education, it further aims to promote student well-being, character development, and academic growth (Bott et al., 2017; Seligman et al., 2009; White & Kern, 2018). However, despite the popularity of positive education, empirical studies that contribute toward theoretical enhancement, particularly from non-Western countries, are limited. In this chapter, I will first briefly review the development and current initiatives of positive education and discuss the need for the consideration of cultural and individual differences toward its effective implementation. Next, an empirical study is presented as an example of culturally modified positive education (i.e., resilience program) in the Japanese context.

A Brief Overview of Positive Education

Development and Current Initiatives of Positive Education

Positive education refers to the application of positive psychological findings within the educational context. When Seligman et al. (2009) first envisaged positive education, they stated three major rationales for its promotion. First, there is an alarming rate of mental health problems among young people, and youth well-being must be prioritized in educational settings. Second, despite societal wealth and growth, the level of life satisfaction has not increased in the last 50 years. Positive psychology aims to study what consists of a "good life," and this endeavor informs the pursuit of fulfilling lives. Third, the research findings in positive psychology have suggested that its implementation in the educational context enhances youth well-being and facilitates better learning.

According to the World Health Organization (WHO), one in seven adolescents experience mental health conditions, and suicide is the fourth leading cause of death of young people aged 15–19 years (2019). Although the level of life satisfaction indicates a slight improvement (OECD, 2020), an international survey of young people in 30 countries found that 49% of the participants reported that their lives

were "too stressful," and 53% reported that their emotional states inhibit their ability to function in everyday life (International Youth Foundation, 2017). Moreover, future uncertainty, such as climate change, natural disasters, pandemics, and economic strain, poses considerable stress on young people's lives. Together, they signify the current relevance of positive education and the importance of cultivating resilience to enhance youth well-being.

Additionally, there has been an increase in positive psychological findings that can benefit educational practices. For example, psychological concepts such as hope, gratitude, grit, mindfulness, mindset, character strengths, and resilience, have been applied and taught within educational institutions (for a review, see Bott et al., 2017; Waters, 2011; Zenner et al., 2014). Moreover, rather than centering on a single concept, a multicomponent well-being model has been created around the acronym PERMA (P: positive emotion, E: engagement, R: relationships, M: meaning, A: achievement; Seligman, 2011). Furthermore, useful frameworks for optimal implementations have been proposed by several scholars (e.g., Norrish et al., 2013; Seligman & Adler, 2019; White & Kern, 2018). In essence, need assessment, goal setting, curriculum development (or modification) and implementation, and ongoing evaluation involving multiple stakeholders are required.

Some of the large-scale positive education examples include Geelong Grammar School in Australia, where entire school initiatives have been undertaken (e.g., Bott et al., 2017; Hoare et al., 2017; Norish et al., 2013; Seligman, 2011; Seligman et al., 2009) and St. Peter's College in Australia which implemented a positive education approach around the PERMA model (Kern et al., 2015; White & Kern, 2018). In the United Kingdom, several local authorities have implemented the UK Resilience Programme—a modified version of the Penn Resiliency Program (Gillham et al., 1995)—in 22 secondary schools, and the evaluation report suggested its effectiveness in the reduction of depressive symptoms, improvement in school attendance, and academic attainment in the Year 7 students (Challen et al., 2011). Furthermore, examples are not limited to western countries; Bhutan has implemented a nationwide positive education initiative in line with its Gross National Happiness (GNH) policy (Adler, 2016; Seligman & Adler, 2019), and their GNH curriculum has contributed to the promotion of student's well-being and academic performances, which found significant differences compared with the control group students (Adler, 2016).

As exemplified above, the initiatives for positive education have been accelerated, and a growing number of schools are joining this movement internationally (Bott et al., 2017; Seligman & Adler, 2019). Although an extensive review is out of the scope of this chapter, a recent review reported 212 school-based positive psychological intervention studies published between 2010 and 2018 that were conducted in around 30 countries (Owens & Waters, 2020). Also, methodological incorporation with online intervention allows more equitable and convenient access for young people, and thus far, many endeavors have been reported. (Francis et al., 2021). Most recently, during the testing time of the unprecedented pandemic of COVID-19, the value and the meaning of human positives shone through; hence, the benefits and potentials of a positive psychological approach have been called upon in various

contexts (Chu, 2022; Mosanya, 2021; Parks & Boucher, 2020; Waters et al., 2021; Yamaguchi et al., 2020).

Issues of Positive Educational Approaches

While positive education implies promising benefits, it is critical to acknowledge that there have been multiple critiques, too (e.g., Cabanas & González-Lamas, 2022; King et al., 2016; Kristjánsson, 2012; Lazarus, 2003; Martin, 2016; Suissa, 2008; White, 2016). First, the implementation of positive education must be grounded in a sound empirical approach and contribute to generating theories. Nevertheless, despite the volume of application, theoretical and empirical attention are lacking (Martin, 2016). Second, children's sociocultural contexts must be considered when implementing positive education programs (King et al., 2016; Lopez et al., 2002). From an ecological perspective (Bronfenbrenner, 1977), each ecosystem influences the determination of individual functionality and their well-being; thus, culture creates a vital context that moderates the effects of the educational treatment. Many positive education programs are Western-born, yet these programs have been exported and implemented in various cultural contexts (e.g., Asia and South America). Thus, it is crucial to consider the unique role of culture in the context of the person-and-environment interaction (Jorgensen & Nafstad, 2004; Linley & Joseph, 2004; Lopez et al., 2005; Peterson, 2006; Shonkoff & Phillips, 2000 and elsewhere). Although several studies have indicated cultural modification in positive education (e.g., Adler, 2016; Cardemil et al., 2002; Lopez et al., 2002; Yu & Seligman, 2002), it is useful to review the factors associated with well-being from cross-cultural perspectives briefly.

Furthermore, individual differences in children must be carefully considered. Schools are complex and diverse environments (e.g., race, gender, religion, socioeconomic status, and culture). Thus, it is imperative to acknowledge and attend to those important underlying factors. Failing to do so may not only render the educational treatment ineffective but also harm the students' lives. Hence, because positive education is neither a "silver bullet" (White & Kern, 2018) nor a "one-size-fits-all" solution (Kibe & Boniwell, 2015; Slemp et al., 2017), relevant professionals must be aware that there are often misconceptions, if not an optimistic assumption, that educational treatment can naturally generate positive changes in a linear manner irrespective of individual differences (White, 2016; White & Kern, 2018). However, to facilitate optimal development in young people, environmental opportunities and individual needs must be achieved (Eccles et al., 1993). Lazarus (2003) highlighted this critical problem of lacking perspective in individual differences in positive psychology. Nonetheless, educational psychologists have traditionally been informed that children's aptitude and treatment interaction predict learning outcomes (Cronbach & Snow, 1977; Snow, 1991), and theories and models of individual learning styles have been widely appreciated (e.g., Cassidy, 2004). Moreover, developmental theorists have recognized that each child has their own zone of proximal development in which they show optimal growth if educators adequately identify and support their

learning (Vygotsky, 1978). As such, the literature indicates the moderation effects of individual differences; however, empirical reports tackling these issues remain scarce.

Well-Being from Cross-Cultural Perspectives

Although the promotion of student well-being is the fundamental purpose of positive education, sociocultural differences provide unique contexts, which necessitates reconsidering the factors associated with well-being from cross-cultural perspectives. For example, Markus and Kitayama (1991, 2010) studied variations of well-being in collectivistic and individualistic cultures and suggested that collectivistic well-being is strongly related to interpersonal engagement, whereas individualistic well-being is strongly related to interpersonal disengagement. Moreover, research indicated that a social context that yields good feelings varies across cultures. In Japan, a more collectivist culture, good feelings are pronounced in relational contexts such as "harmony" and "friendliness," whereas in the United States, an individualistic culture, good feelings are instantiated as in "proud" and "superior" (Kitayama et al., 2000). Lu and Gilmour (2004) corroborated such perspectives. In their study, they contrasted the perception of happiness between Chinese and American students and reported that the Chinese students conceptualized happiness as a harmonious, balanced state of mind, whereas the Americans noted a more emotionally charged, upbeat, strong, positive state of mind. These findings indicate that people's well-being is promoted by various perceptions and emotions according to their cultural backgrounds.

As such, culture provides foundations on how people relate and strive to experience emotions, and this influence is present from childhood. Tsai et al. (2007) examined best-selling storybooks for young children and reported that while American books had significantly more excited expressions, Taiwanese books had calmer expressions. Additionally, the children's preference in emotional status differed, such that the American children preferred a more excited emotional state and associated them with happiness than the Taiwanese children did (Tsai et al., 2007). These findings supported previous results with college students (Tsai et al., 2006), indicating that culture creates the foundation for the proclivity of people's emotional expression and, by extension, for defining their well-being. Furthermore, cross-cultural research in cognitive tasks has indicated that European Americans seem to incline to attend to salient objects (i.e., analytic), whereas East Asians focus more on relations and contexts (i.e., holistic; Ji et al., 2000; Kitayama et al., 2006; Nisbett & Miyamoto, 2005). Although further investigations are warranted to ascertain these cultural differences at the neurobiological level, research from cultural neuroscience proposes potential neural substrates that associate differential cognitive responsivity to social stimuli (Chiao, 2009; Chiao & Immordino-Yang, 2013; Han & Northoff, 2008). Taken together, sociocultural contexts require further research regarding the application of educational treatment in different cultural settings.

Well-Being and Individual Differences

Given the subjective nature of well-being (Diener et al., 2003; Oishi & Diener, 2001), it is important to consider the interaction effects of individual differences and environment. Consequently, it would be useful to apply "if …then …" patterns of interactions (Mischel & Shoda, 1995; Oishi, 2000). Using an example from cultural differences, if self- (vs. relation-) oriented individuals experienced uniqueness eliciting interactions, then they would feel good about their experiences. Similarly, if extraverted individuals experienced highly social interactions, they would subsequently feel higher satisfaction in their lives. Hence, the person-and-environment match has been studied within developmental psychology as an expression of "goodness of fit" (Thomas & Chess, 1977). Individual differences are also observable as temperamental differences in a newborn (Rothbart & Bates, 2007), and these characteristics of personality differences show rank-order stability across the life span (Roberts & DelVecchio, 2000).

If, for example, relation- (vs. self-) oriented students were to experience uniqueness eliciting interaction in a social context, would they achieve higher satisfaction and hence promote their well-being? Or, if introverted students were to attend a large gathering, in which self-promoting students draw recognition, would they feel good about themselves? Here is a practical caveat when promoting "positive emotion" in a uniform/collective manner (e.g., joy, high arousal happiness, and excitement) in the given contexts (e.g., classroom). Should such positive emotion dominate and students' and teachers' attention broaden (Fredrickson, 1998; Fredrickson & Branigan, 2005), then they may be less likely to attend to individual differences (i.e., narrowing attention), which might facilitate unintentional marginalization. Perhaps, the strength-based (Linkins et al., 2014; Peterson & Seligman, 2004) and mindfulness-based (Kabat-Zinn, 2003; Zenner et al., 2014) approach would potentially promote children's resilience and provide opportunities for balanced interaction to enhance their authentic well-being. Nevertheless, empirical research is required to elaborate on the theoretical rationale.

There has also been an important reconceptualization of the interaction of children's characteristics and their environment. Traditionally, children with high fearfulness, reactivity, and negative emotionality were deemed to have "a difficult temperament" (Thomas & Chess, 1977), and research has indicated that when such children experience adverse environments, they are more prone to express maladaptive adjustment, such as externalizing and internalizing problems (Kochanska, 1993; Mezulis et al., 2006). This perspective has been supported from a dual risk (or diathesis–stress) paradigm, and these characteristics—high susceptibility to risk factors—were often described as vulnerability (vs. resilience) in children. Nonetheless, these temperaments do not confer inevitable vulnerability per se; rather, children with high susceptibility might also respond to a favorable environment to a greater extent because of their high susceptibility (Belsky, 1997). This reconceptualization of child vulnerability has received significant attention and led to the proposal of the differential

susceptibility theory (DST: for details, see Belsky & Pluess, 2009; Boyce & Ellis, 2005; Ellis et al., 2011).

Research has found that children's difficult temperament moderated the effects of parenting on their development (e.g., Kochanska et al., 2007). For example, in an intervention study, the children with high irritability showed a high probability of secure attachment when their mothers improved their parenting sensitivity, but such effects were not observed with the less irritable children (Cassidy et al., 2011). Thus far, a substantial body of research has corroborated the DST perspective and indicated that children with higher susceptibility, who tend to show vulnerability under adverse environments, can respond more favorably than their counterparts in a positive environment. Bakermans-Kranenburg and van IJzendoorn (2015) described such moderation effect as "hidden efficacy" because these individual differences in response to the environment were masked under the main effects. Moreover, Masten (2019) mentioned that DST and related perspectives pose "one of the most provocative questions" in children's adaptive systems because it implies that children's vulnerability can function as plasticity according to the environmental quality (van IJzendoorn et al., 2020). Although DST seems to provide a promising foundation for theoretical exploration, limited research has been undertaken from a positive education perspective.

An Empirical Example of Culturally Modified Resilience Education

Youth mental health problems are prevalent globally (WHO, 2017). Moreover, an international survey has indicated that Japanese youth reported very low self-esteem and ranked lowest among the participating countries (Japan, South Korea, the United States, the United Kingdom, Germany, France, and Sweden; Cabinet Office, 2019). Given such circumstances, educators have recognized the importance of cultivating resilience in young people, and school-based resilience interventions have been undertaken. In this section, I briefly introduce an empirical example of such an endeavor; a case study of culturally modified resilience education, which was implemented in a Japanese high school and investigated from the DST perspectives (for details, see Kibe et al., 2020).

Study Context and Participants

This study was conducted in a Japanese high school, which has a unique curriculum to send its second-grade students (11th grade) to a 1 year overseas program. However, before the students' departure, the school wished to cultivate their resilience (i.e., protective factors) as a preventive measure, and they consulted the school counselor.

Consequently, the school counselor suggested delivering resilience education as a supportive intervention, and the program was implemented when the students were in the first grade (age = 15–16, $N = 407$: male = 192, female = 215).

Resilience Program and Cultural Modification

First, by applying the SPARK resilience program (Boniwell & Ryan, 2009), a cultural modification was made in a collaboration with multiple professionals (e.g., the school counselor, teachers, researchers, and professionals of positive education). This resilience program was developed based on Cognitive Behavioral Therapy (CBT) to prevent youth mental health problems by incorporating concepts of positive psychology (e.g., strength, positive emotion, posttraumatic growth) and validated with adolescents in the United Kingdom (Pluess & Boniwell, 2015; Pluess et al., 2017).

Through the course of modification, three major changes were made so the program fit within the current school context: (1) compressing the 12-lesson program to a six-lesson program, (2) changing the case studies to Japanese-relevant examples, and (3) changing the lesson order for the benefit of students' acceptability. Notably, besides replacing the previous case studies with culturally relevant case studies and examples, special care was taken with the lesson order based on cultural differences. Although the original UK program was designed to focus on the role of cognitions first, the Japanese version was deliberately modified to focus on emotions first. The rationale behind this modification was that Japanese people are inclined to attend to relational—rather than analytic—aspects (Nisbett & Miyamoto, 2005); hence, emotions significantly influence the social context. Furthermore, adolescence is a developmental phase with heightened emotionality (Galván & Tottenham, 2016), which would increase their susceptivity to emotional components. Thus, to suit the Japanese adolescents, the emotional components were moved to the earlier section so the students could resonate with the program contents based on their own experiences. This modified program was delivered in 3 months by a school counselor who received official training in the program. Table 19.1 shows the details of the lesson contents and the difference between the original program.

Measures and Analyses

The students answered various questionnaires at pre, post, and 3 months after the intervention program. The measured concepts are presented below.

Table 19.1 Outline of the modified SPARK resilience program

Lesson		Contents and key activities	UK lesson[a]
1	What is resilience?	Introduction of multidimensional construct of resilience	1
		Promote students' understanding of the concept	
		Define and visualize your version of resilience	
2	Magic of distraction	Role of emotions and skills to deal with them	8
		List up various ways of self-distractions	
		Scientific findings on effective ways of distraction	
		Finding own strategies based on empirical findings	
3	Resilience muscle training	Protective factors enhancing resilience	11
		Identify social supports	
		Reflection of past experiences	
		Positive reflective photos	
4	Growing from adversity	Concepts and examples of post-traumatic growth	10
		Learning natural human reactions to adversity	
		Case studies of post-traumatic growth (PTG)	
5	Understand the negative spiral	Psychological mechanism of negative spiral (CBT[b] model)	2, 3, 4, 5
		Understand the role of perception	
		Finding your inner voice	
		Identify relationships of perceptions and emotions	
6	Challenge your negative spiral	Role of perception and challenge in the negative spiral	6, 7, 9
		Objectify the perception	
		Challenge and alter your inner voice	

Note [a] Numbers represent the original UK version. In this modified program, UK Lesson 12 was omitted

[b] CBT refers to cognitive behavioral therapy

Resilience

The Bidimensional Resilience Scale (Hirano, 2010) was used as a self-report questionnaire. This is a five-point Likert scale with 21 items that consists of two subscales of innate and acquired resilience factors. The internal consistency of this scale was $\alpha = 0.87$.

Self-esteem

The students answered the Japanese version of the Rosenberg Self-Esteem Scale (Sakurai, 2000). This is a 10-item questionnaire with a four-point Likert scale. The internal consistency of this scale was $\alpha = 0.80$.

Self-efficacy

The Japanese version of the General Self-Efficacy Scale (Ito et al., 2005) was used to measure students' self-perception. This is a 10-item questionnaire with a four-point Likert scale. The internal consistency of this scale was $\alpha = 0.90$.

Depression

To observe the effects of the intervention, the students reported their mental health condition with the Japanese version of the Birleson Depression Self-Rating Scale for Children (Nagai, 2008). This is an 18-item questionnaire with a three-point Likert scale. The internal consistency of this scale was $\alpha = 0.86$.

Sensory Processing Sensitivity

To investigate the individual differences of students' susceptibility, sensory processing sensitivity (SPS: Aron & Aron, 1997) was measured. SPS has been suggested to create the foundation for individual sensitivity to environmental information. In this study, the Japanese version of the Highly Sensitive Child Scale for Adolescence (Kibe & Hirano, 2019) was used before the intervention. This is an 11-item questionnaire with a seven-point Likert scale. The internal consistency of this scale was $\alpha = 0.70$.

Analyses

In this study, the data were analyzed based on the DST perspective. The authors hypothesized that the highly susceptible students (i.e., high in SPS) would show

lower well-being (i.e., resilience, self-esteem, and self-efficacy) and higher depressive symptoms at baseline due to their high sensitivity (to stress) but would benefit more from the resilience education because of their high sensitivity (to support). Additionally, the latent growth curve model (LGCM) analysis was conducted to observe the intervention efficacy and students' mental health change over time.

Results and Discussion

This study developed a Japanese version of resilience education through a careful cultural modification emphasizing the emotional component. This modification has led to positive and meaningful feedback not only from the students but from the teachers, too. Some qualitative feedbacks from students are, "it was an eye-opening experience to learn that it is okay to have negative emotions and that even negatives have an important role" and "I now realize that I should value myself more." Also, teachers noted that "the students seem to be more comfortable and open to sharing their emotions," and "the resilience education equipped the students with a common language to share their emotional experiences." These comments are particularly valuable as it had been a Japanese tradition to discipline children not to express their emotions explicitly. Although such practice cultivates a modest attitude in youngsters, it has a potential downside to negating their emotional experiences. As discussed earlier, adolescents are prone to experience emotional disturbance; therefore, acknowledging their emotions and healthy articulation is key to their well-being. In this regard, program modification around cultural and developmental needs has enabled the students to acquire the skills necessary to develop their resilience.

In addition, the benefits of the universal approach were found when the effects of the program were analyzed quantitatively; the results indicated favorable effects on overall students' significant self-efficacy enhancement. Nevertheless, the baseline assessment found that the sensitive students with high SPS reported significantly lower self-esteem ($F_{(2,\,391)} = 8.26, p < 0.001$), self-efficacy ($F_{(2,\,389)} = 2.43, p < 0.01$), and higher depressive symptoms ($F_{(2,\,388)} = 11.00, p < 0.001$) than the less sensitive (i.e., low SPS) students (Table 19.2). Nevertheless, the LGCM analyses with the SPS predictor revealed moderation effects of students' sensitivity. That is, the susceptible students indicated greater benefit in the reduction of depression and enhancement of self-esteem. Table 19.3 presents the details of the results. Regarding students' depression, the regression weight from the SPS predictor to the intercept ($\beta = 2.05$, $p < 0.001$) and the slope ($\beta = -0.51$, $p < 0.01$) were significant, which suggested that susceptible students showed higher depression at baseline but a greater reduction in depression after the intervention. Furthermore, as for students' self-esteem, the regression weight from the SPS predictor to the intercept ($\beta = -1.88$, $p < 0.001$) and the slope ($\beta = 0.60$, $p < 0.001$) were significant, which indicated that highly sensitive students showed lower self-esteem at baseline but a greater enhancement in self-esteem after the intervention.

Table 19.2 Baseline differences for main variables by gender, SPS, and interactions

		Male		Female		Main effects (Gender)	Main effects (SPS)	Interaction effects (Gender × SPS)
		M	*SD*	*M*	*SD*	$F(df)$	$F(df)$	$F(df)$
BRS	SPS (0)	73.53	14.45	76.23	13.28	0.41(1, 394) *n.s.*	1.45(2, 394) *n.s.*	3.63 (2, 394) $p < 0.05$
	SPS (1)	76.87	10.57	73.26	11.63			
	SPS (2)	70.92	13.92	74.26	10.54			
RSES	SPS (0)	27.08	4.94	25.75	5.66	3.94 (1, 391) $p < 0.05$	8.26 (2, 391) $p < 0.001$	0.40 (2, 391) *n.s.*
	SPS (1)	25.22	5.51	23.47	5.37			
	SPS (2)	23.50	6.67	23.03	5.97			
GSES	SPS (0)	27.43	5.62	27.85	6.32	0.14 (1, 389) *n.s.*	2.43 (2, 389) $p < 0.01$	1.46 (2, 389) *n.s.*
	SPS (1)	27.32	5.35	25.78	4.93			
	SPS (2)	25.72	5.58	26.17	6.24			
DSRS	SPS (0)	9.25	5.71	10.11	5.76	1.00 (1, 388) *n.s.*	11.00 (2, 388) $p < 0.001$	0.04 (2, 388) *n.s.*
	SPS (1)	11.39	6.18	11.84	5.92			
	SPS (2)	13.38	7.04	14.01	6.28			

Note. SPS (0), (1), (2) each represents low (−1 *SD*), medium, high (+1 *SD*) in SPS group respectively. SPS was measured with the Japanese version of the Highly Sensitive Child Scale for Adolescence (J-HSCS). BRS = Bidimensional Resilience Scale; RSES = Rosenberg Self Esteem Scale; GSES = General Self Efficacy Scale; and DSRS = the Birleson Depression Self Rating Scale for Children (Adapted from Kibe et al., 2020, Table 4. https://journals.plos.org/plosone/article/figure?id=10.1371/journal.pone.0239002.t004)

Although the initial results of the resilience education yielded favorable effects for overall students' self-efficacy enhancement, further moderation analyses using LGCM revealed individual differences in response to the universal intervention. These findings supported the DST perspectives and illustrated that highly susceptible adolescents are more likely to be affected by stressful environments but also likely to benefit from supportive environments.

Table 19.3 Effects of gender and SPS as predictors on the efficacy of the intervention in latent growth curve model (LGCM)

	Predictors	Intercept		Slope		Fit indices			
		β	*SE*	β	*SE*	x^2 (*df*)	*p*	CFI	RMSEA
B.R.S.	Gender	0.19	1.18	0.63	0.64	17.41 (5)	0.00	0.97	0.08
	SPS	−0.93	0.74	0.29	0.40				
RSES	Gender	1.04	0.54	−0.08	0.28	29.47 (5)	0.00	0.95	0.11
	SPS	−1.88***	0.34	0.60***	0.17				
GSES	Gender	0.48	0.55	0.15	0.32	401.46 (5)	0.00	0.00	0.44
	SPS	−0.93**	0.35	0.29	0.20				
DSRS	Gender	−0.45	0.59	−0.10	0.30	7.40 (5)	0.19	1.00	0.03
	SPS	2.05***	0.37	−0.51**	0.19				

Notes ** $p < 0.01$, *** $p < 0.001$. β represents estimated regression weight of predictors. SPS was measured with the Japanese version of the Highly Sensitive Child Scale for Adolescence (J-HSCS). CFI = comparative fit index; RMSEA = root mean square of approximation; BRS = Bidimensional Resilience Scale; RSES = Rosenberg Self Esteem Scale; GSES = General Self Efficacy Scale; and DSRS = the Birleson Depression Self Rating Scale for Children
(Adapted from Kibe et al., 2020, Table 5. https://journals.plos.org/plosone/article/figure?id=10.1371/journal.pone.0239002.t005)

Conclusion

This chapter provided an overview of the development and the current initiatives of positive education and demonstrated that further attention must be provided to sociocultural contexts and individual differences through robust empirical research. Although it is feasible, the implementation of positive education often takes a universal approach, and this may mask important moderation effects. The empirical example presented here indicated such a caveat by illuminating the interaction effects of individual differences from the DST perspectives. Nevertheless, since this study was a single-arm design conducted in one high school, the generalizability of the results requires careful consideration. Nonetheless, these findings provide a unique case study of culturally modified positive education and novel evidence for the DST perspective, which has a research gap in the non-Western context (Iimura & Kibe, 2020). Although the field has the promising potential to contribute to the next generation by cultivating resilience and promoting well-being, it requires further research on methodologies and theory-based discussion from multicultural perspectives.

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Chapter 20
Positive Psychology for Fostering Flourishing of Children and Adolescents: Insights from Israel

Tammie Ronen

Abstract The main challenge facing parents, educators, and therapists is to facilitate children's and adolescents' positive adjustment and flourishing. Positive functioning enables youngsters to overcome difficulties relating to thoughts, emotions, and behavior, to cope with life's challenges and to experience a high ratio of positive to negative emotions, which is a key predictor of human flourishing. Facilitating positive functioning is crucial as childhood and adolescence are periods characterized by rapid individual personality changes. Such changes are due to physical growth and psychological and cognitive development, which necessitate coping with fluctuations in appearance, thinking style, and behavior. Moreover, inasmuch as childhood disorders are critical predictors of adults' mental health problems, it is vital to implement effective preventive interventions early, during childhood and adolescence, with an emphasis on maximizing at-risk individuals' positive adaptation and flourishing. This chapter presents the importance of well-being in childhood and adolescence, as it relates to ordinary and extraordinary risk factors that may be encountered during these periods. Furthermore, the chapter elucidates the importance of boosting well-being for both low- and high-risk youngsters. Also discussed are the cultural characteristics of Israeli children and adolescents (both Jews and Arabs) and psychological components that can facilitate flourishing. The last sections of the chapter report on the nature and/or efficacy of intervention projects espousing a positive psychology approach and focusing on low-risk and high-risk populations in Israel.

Practitioner Points

- To help at-risk youngsters flourish, interventions should be given early, be conducted within the school system and by teachers, or with their families and concentrate on three major directions of training: helping youngsters to apply self-control skills, reduce negative affect, express positive emotions, and develop personal resources.

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- Self-control skills can be cultivated by verbal program during school hours, group training after school, or activities such as constructed sport or music focusing on increasing skills.
- Positive relationships and social support are also crucial to help at-risk youngsters develop resilience; such relationships can be developed through training for social skills and increasing awareness of their loved ones serving as partners during stressful experiences.

In the past, psychological interventions were traditionally aimed, by and large, to protect individuals from harm, alleviate their distress, and help them feel secure. In recent decades, psychological interventions have included additional aims related to helping humans attain high levels of well-being. This modern focus on well-being has coincided with a shift in definitions of mental health to include not merely the absence of psychopathological symptoms of mental illness (as traditionally defined up until the late 1990s) but also the presence of resources, skills, and strengths (Mjøsund et al., 2015; Ryff, 2014; Seligman et al., 2006). Relatedly, Diener et al. (2013) claimed that youngsters' ability to maintain high levels of well-being predicts relevant future behavior in adulthood.

Well-being can be construed in various ways, with many scholars focusing on its emotional and cognitive aspects. For example, Diener et al. (2013) defined subjective well-being as a combination of cognitive and emotional aspects, that is, "the level of well-being experienced by people according to their own subjective evaluations of their lives" (p. 153). These evaluations include "cognitive judgments about life satisfaction and affective reactions to life" (p. 153). Accordingly, subjective well-being can be construed as comprising life satisfaction, positive affect, happiness, and low negative affect (Diener et al., 2013).

Regarding the emotional aspect of subjective well-being, positive and negative affect have been widely studied, as well as the ratio between these two variables, which are considered to be distinct but not opposite from one another. Positive affect includes happiness, satisfaction, joy, energy, relaxation, and so on (Fredrickson, 2009; Keyes, 2006). While flourishing is considered to involving all of the above-mentioned components, the opposite of flourishing is languishing, meaning to lack in all of the above. According to Fredrickson (2009), positive emotions broaden momentary thought-action repertoires, resulting in a higher likelihood of pursuing a wider range of thoughts and actions. In other words, when people feel positive emotions, they are able to see more possibilities. This broadening effect is essentially on the other end of the spectrum of what happens when people experience negative emotions (Magyar-Moe, 2009). According to Fredrickson (2009, 2013), negative emotions narrow momentary thought-action repertoires. The balance between positive and negative emotions has been a source of great interest for researchers. Studies have shown that high rates of subjective well-being occur when low levels of negative emotion coincide with high levels of positive emotion (Bradburn, 1969). The extent to which an individual experiences more positive than negative emotion is referred to as the "positivity ratio" (Fredrickson, 2009).

Based on Ryff's (2014) model of subjective well-being, Keyes and Ryff (2000) and Keyes (2006) suggested that the concept of flourishing relates to the combination of cognitive, emotional and social well-being. They describe flourishing as relating to a person with high levels of well-being who functions effectively in all six of the following personal and environmental components: (1) self-acceptance; (2) finding purpose and meaning in life; (3) continuous personal development and growth; (4) self-control, self-determination, or independence; (5) mastery; and (6) establishing positive, meaningful relations with others (Keyes, 2006; Rosenbaum, 1999).

Although researchers have adopted various ways to conceptualize well-being, there are no major differences between well-being or flourishing. Both concepts focus on the emotional state (comprising high levels of positive affect and low levels of negative affect), assessing and accepting oneself as being content and satisfied with one's life (the cognitive component), as well as having a positive environmental support system (which is the social, the interpersonal component).

Flourishing Among Children and Adolescents

Flourishing is one of the major concepts relating to subjective well-being. Keyes (2006) asserted that more than half of American adolescents are flourishing, while only a small percentage of them are languishing. To further unravel the role of personal and environmental resources in explaining flourishing in children and adolescence, I undertook a series of studies together with my colleagues highlighting the moderating effect of children's and adolescents' strengths and resources on their ability to express happiness, life satisfaction and positive affect (Ronen & Seeman, 2007). Similar to Keyes' (2006) claim which was based on studies conducted in the USA, we found that the majority of youngsters in Israel were also flourishing. For example, among the general adolescent population, our research indicated high levels of positive emotion among those who liked their school and found meaning in their engagement in school activities (Orkibi & Ronen, 2015).

Our studies also pinpointed self-control and social support as important resources for helping youngsters cope in times of distress as well as to flourish in spite of distress (Folkman, 2008), such as under the threat of war. For example, we examined Israeli children facing the expected threat of Iraqi rocket attacks with chemical warheads during the 1991 Gulf War (Rosenbaum & Ronen, 1997) and Israeli adolescents' fear of cross-border missile attacks (Ronen & Seeman, 2007). In both studies, we found that self-control skills and social support, jointly and separately, moderated the link between youngsters' fear of war and their subjective well-being. That is, children and adolescents with high self-control and high social support demonstrated high positive affect and low negative affect as well as high overall life satisfaction compared to adolescents with low levels of these resources. Furthermore, adolescents who expressed strong fears about the possibility of war required these important resources in order to achieve high subjective well-being and cope with their fears. In other studies (Orkibi & Ronen, 2015; Ronen et al., 2014), self-control skills and

social support also enabled children to express positive emotions in times of crisis (divorce, sickness, or death). Likewise, we found that self-control, positive affect, and social support all helped increase flourishing in aggressive children and adolescents with gambling and drinking problems, both in Arab and Jewish populations (Orkibi et al., 2015; Shachar et al., 2016).

Flourishing Among Children and Adolescents At-Risk

While parents, educators, teachers, and therapists view children's and adolescents' well-being as an important goal of childrearing, education, and intervention, there are many risk factors involved in typical development and change processes that make this goal difficult to achieve. The ability to flourish is important for every human being (Seligman et al., 2006). However, it is especially significant for children and adolescents, who are at-risk due to their age-related stressors, changes, and crises brought about by internal psychological, emotional, or behavioral causes and exposure to environmental difficulties related to their developmental period. Being able to flourish during childhood and adolescence may predict and enhance the ability to flourish later during adulthood (Steinberg, 2007).

In particular, the adolescent period is characterized by rapid individual personality changes due to physical growth and psychological, social, and cognitive development. These changes necessitate adolescents to acquire new skills to help them cope with environmental as well as personality changes and adapt to society (Erikson, 1950; Gelhaar et al., 2007; Steinberg, 2007). Moreover, a wide range of cultural and environmental transformations occur as a result of adolescents' increased family responsibilities, rising academic and social demands, separation and individuation from the family unit, and exploration of stressful new experiences with peers and novel adult activities (Steinberg, 2007). Risk factors may relate to the family—such as experiencing parental divorce, a family member's illness or death, or neglect or abuse by parents—or to the wider environment, such as experiencing trauma, danger, stress, or loneliness (Moore & Varela, 2010). Regarding familial or environmental crisis, research on stress and coping has focused on the impact of major life events on children and adolescents (Gelhaar et al., 2007) and their individual responses to such events. Youngsters' responses to a family crisis may differ according to the kinds of coping mechanisms that they activate (Coleman & Hagell, 2007; Gelhaar et al., 2007).

Children and adolescents can be at risk when, in addition to facing their normal developmental changes and crises, they experience neglect or danger (Folkman, 2008). Such additional risk factors may relate to youngsters' own personality components like experiencing learning difficulties, developmental deficits, deviant behavior or chronic health problems. Regarding personality risks, epidemiological studies and large-scale surveys have indicated that emotional and behavioral problems are quite common among children (Kazdin, 2000, 2005).

During early childhood and adolescent periods, children and adolescents are expected to develop self-identity, thoughts about the future, self-control skills, social competencies, the ability for self-acceptance as well as acceptance of others, and the capacity to explore and experience the world around them (Arnett, 2000; Steinberg, 2007). Therefore, when youngsters grow up under social conditions that lack adequate parental figures or sufficient acceptance and modeling from their own families and communities, they face increasingly greater risks for the development of mental health disorders and the emergence of more severe problems at younger ages (Kazdin, 2005; Masten et al., 2006). In such contexts, youngsters may exhibit more high-risk behaviors (e.g., substance abuse, aggression; Gabriel-Fried & Ronen, 2015), which, in turn, may prevent them from developing confidence and attaining high levels of well-being.

For youngsters facing additional risk factors beyond those associated with the typical age-appropriate changes and crises, studies have pinpointed the role of intra- and inter-personal resource components such as self-efficacy, positive relationships, and hope in order to promote flourishing (Keyes, 2006; Lavy, 2019). In high- risk or dual-risk situations, achieving subjective well-being is of even greater importance. In this context, well-being serves a unique role in helping youngsters cope with crises, become resilient, and improve their functioning so that these stressful negative experiences will not impair their adjustment (Dahl, 2004; Fredrickson & Losada, 2005). Those who successfully achieve high levels of well-being may be able to bounce back from negative experiences and adapt more easily to ever-changing demands (Reschly et al., 2008). Hence, children's and adolescents' attainment of high levels of subjective well-being may be crucial (Coleman & Hagell, 2007) to promote their learning, adjustment to society, and life quality (Fredrickson, 2009). In addition, when considering children's well-being, the role of culture and environment is also of importance.

The Israeli Culture and Its Link to Well-Being

Outcome studies regarding Israeli children who experience varied risk factors have presented a general tendency of children in various cultural milieu to cope with distress and, at the same time, maintain high levels of well-being. The present section relates specifically to the Israeli culture and characteristics that can impact children's well-being.

Israel is a modern western society in which culture, education, democratic political structure, economic system, and social norms resemble those of other western countries. The majority of the population is Jewish, most of whom are secular although some participate in traditional forms of religious observance and both generally demonstrate a similar lifestyle. Their residential settings in cities, towns, and villages; their fashion and musical tastes; their learning methods and workplaces; their social relationships and family bonds all resemble those characterizing vibrant western countries such as the United States or European nations. Only a small minority

of ultra-Orthodox Jews in Israel exhibits a distinct culture. They live in closed communities in separate towns, isolating themselves from the general population, dressing modestly, attending segregated educational settings that focus on religious studies, and opting for traditional lives of religious scholarship rather than gainful employment.

The Arab population, who form the largest minority group in Israel, often resides in separate villages, towns, and cities and attends a separate education system, although some cities have a mixed population of Arab and Jewish residents. The Arabs who live in mixed or large urban centers have a lifestyle that often resembles that of the Jewish population. Those who live in more rural or peripheral parts of the country (villages in the north or south) differ from the Jewish majority in significant social characteristics—national identity, religion, culture, and language. Most Arabs in Israel are Muslim, followed by Christian, Druze, and Bedouin. Generally regarded as a more traditional culture and underprivileged group in Israel, the Arab minority is undergoing a rapid process of modernization. Yet, traditional collectivist and patriarchal norms continue to predominate social aspects of Arab life, particularly for females (Haj-Yahia & Ben-Arieh, 2000). As a patriarchal society (Haj-Yahia et al., 2000), males tend to support the family and make decisions while females hold responsibility for the family's daily life while continuing to obey the husband. At the same time, Arab ethnic identities have been linked to a sense of affirmation and belonging. Moreover, achievement of a sense of belonging to an ethnic group has been found to be significantly positively correlated with psychological well-being (Abu-Rayya, 2006).

While flourishing is the main goal in every society, and the well-being of children and adolescence is at the center of attention for parents, educators, teachers and therapists, an important question to address is how Israeli children can flourish. Flourishing is especially crucial for children and adolescents in Israel, where they may be exposed to higher levels of stressors due to the constant threat of war and terrorism, a divisive sociocultural climate, and distressing geopolitical events (Orkibi & Ronen, 2015; Wolmeret al., 2011).

Positive Psychology and Positive Education for Populations At-Risk in Israel

Seligman et al. (2005) previously presented the potential effectiveness of interventions that apply positive psychology to promote flourishing and supported the application of such interventions for helping people change. Moreover, the populations that can greatly benefit from these interventions are children and adolescents.

In my research lab at Tel Aviv University, we develop intervention programs by adapting prior research outcomes that have proven the efficacy of training methods to help children and adolescents deal with risk factors and improve their well-being.

Thus, over recent decades, we have developed numerous protocols that teach children how to cope with behavioral disorders such as enuresis, sleep disorders, fears and anxiety, aggression, trauma, and more—all while applying positive psychology methods (Ronen, 2004; Ronen & Rosenbaum, 2010; Ronen et al., 2014). The next sections will describe some examples of our positive psychology intervention programs.

Children and Adolescents with Cancer

One area of risk that we are pursuing is pediatric cancer. Children with cancer and their parents experience severe stress as a result of the illness' life-threatening nature, the treatments and their side effects, social isolation, economic losses, and more. During adolescence, in particular, the need to remain under the care of the immediate family may hinder youngsters' major psychological developmental task of separating from parents and seeking out one's own identity within the peer group. Adolescents who are sick experience forced disengagement from their social environment, both physically and emotionally, which can lead to feelings of sadness and loneliness. With Irit Schwartz-Atias, a former doctoral student of mine who is a charge nurse in the oncology department at Schneider's Children's Hospital, we conducted a study on the positive emotions of children during cancer treatment and their parents. We studied the children's skills, strengths, and resources such as social support, hope, and subjective well-being. Our findings revealed that, together with the difficulties in coping with a life-threatening illness, pediatric cancer patients and their parents nonetheless experienced twice as many positive emotions as negative emotions. In the parent group, the parents' perceptions of their child's illness were significantly correlated with their subjective well-being—the less the parents felt emotionally disturbed by their children's illness, the more positive the emotions they displayed. (The report for this study is currently being translated from Hebrew to English).

Following these results, the pediatric oncology department's staff looked for creative ways to provide children and adolescents with resources or approaches to cope with these situations effectively. One of the approaches adopted was mindfulness. As part of the standard treatment program, mindfulness workshops are now being held for both the sick children and their parents to help them attend to and enjoy the positive moments and experiences that they encounter even during these difficult times. In these workshops, they learn to be more aware of their feelings and body sensations and focus on their needs. Both children and their parents reported that the practice of mindfulness, along with emotional sharing, helped them feel that they had partners who were joining them in their journey to search for bright spots in the darkness. Another resource provided to the children with cancer and their family members was a game that guides players towards positive thinking and positive behavior. Beyond the game's contribution to the well-being of the children and their parents, it also enabled the participation of siblings, who were also struggling and often felt that their emotional care had been pushed aside. Acceptance and

internalization of positive thinking practices during their time with us in the hospital may also help these families to continue applying a positive psychological approach when dealing with future stressful treatments and subsequent stages of their battle with cancer.

Developing Flourishing Among Children and Adolescents with Disruptive and Aggressive Behavior

Another at-risk population of interest in our research and interventions is children and adolescents who demonstrate disruptive and aggressive behaviors. These prevalent social and behavioral problems can be risk factors that can lead to increased rates of school dropout, endangerment behaviors, and deviant disorders (Kazdin & Weisz, 2010).

Gilbert (2005) states that human beings need to feel they can control their lives and that losing control is related to the development of emotional and behavioral disorders. Based on the available research on the link between self-control and aggression, we created a socio-developmental model of aggression. This model assumes that, for unspecified reasons, aggressive youngsters fail to acquire self-control, social and emotional skills during their early stages of development. Furthermore, it presumes that the acquisition of self-control skills is necessary to gain the social skills and prosocial strategies essential for children and adolescents to obtain social resources. Thus, we have developed a series of positive psychology programs as part of our targeted intervention. The first two programs were empowerment interventions in schools and a sports-based intervention. The programs were conducted in controlled studies to determine their effectiveness in decreasing the risks faced by children and adolescents who had demonstrated aggression. The interventions aimed to help prevent these youngsters from developing further disorders and to foster their well-being. The third program was music-based and was conducted as a longitudinal intervention for children at-risk, the results of which are currently being assessed in order of finding the way music can decrease risk and increase well-being among children.

The Empowerment Intervention Program in Schools

The empowerment program targeting aggressive youngsters aims to teach a multi-faceted repertoire of learned resourcefulness skills (Rosenbaum, 1999). First, based on the current literature, we assumed that children and adolescents must acquire important cognitive, emotional, social, and problem-solving skills to reduce aggression. Regarding cognition, youngsters need to be taught to (a) identify how they automatically process social cues (Dodge & Pettit, 2003) in a hostile and negative way, and (b) gain control over their automatic hostile attributions and negative thoughts

by changing them into positive, more functional ways of thinking (e.g., “He is not laughing at me; he is laughing because he heard a funny story” or “The teacher is not against me personally; she just really believes I was the one who told that joke and disrupted the class”). Moreover, to control the anger that underlies their aggressive behavior, youngsters must acquire affect-related skills for experiencing, expressing, identifying, and accepting their anger and other relevant emotions (Ronen & Rosenbaum, 2010). Through drawing, role-playing, and other training exercises, children and adolescents can learn to identify their internal physical sensations, which leads to awareness of their own emotional cues.

Furthermore, youngsters also require social skills to gain control over their aggression, both for identifying social cues as well as developing empathy and compassion for others’ needs and motivations. These skills can be obtained via analysis of stories, role-playing, and discussion of their own social interactions. For adolescents, we aim to stimulate interest and motivation by presenting the program’s emphasis on what we believe are the social issues of key relevance at this developmental stage. We present the program as a way to learn more about oneself, enable more independent functioning, and build up self-control—all for the purpose of achieving better social relationships. Finally, youngsters must also learn problem-solving skills to help them plan and direct their behavior in the future (Kazdin & Weisz, 2010).

To implement the empowerment intervention program, we designed a structured, detailed learned resourcefulness manual to teach positive psychology in general, and self-control, in particular, to reduce aggressive behavior among school students. This program aimed to enable teachers to guide a small group school-based educational intervention (Ronen & Rosenbaum, 2010). The program was introduced as a scientific course that taught children about their own bodies and experiences by asking them to observe, chart, and raise hypotheses regarding their thoughts, emotions, and behaviors. The children received research assignments to practice at home and then review during sessions. First, to empirically test the model’s efficacy, undergraduate students carried out the program in small groups of school students in the university setting. After the successful results of this research clinic, we then trained teachers to apply the model in actual school settings, which was then followed by the implementation of the program across educational systems (Ronen & Rosenbaum, 2010).

Next, we examined the efficacy of the initial implementation of the program in schools by comparing 167 ninth graders who underwent the intervention program with 280 of their peers from the same schools who received no intervention (the control group). Research outcomes indicated the model’s efficacy, where the intervention group demonstrated significant decreases in both objective and subjective aggression rates compared to their baseline rates and the control group. Interestingly, hostile thoughts and negative emotions did not change, which could mean that, after the intervention, these youngsters could experience such thoughts and emotions without behaving aggressively. The empirical analysis attributed this reduction in aggression rates to an increase in self-control skills.

Outcomes from the first three years of the empowerment program implementation in schools revealed meaningful positive change for high percentages of participating students. That is, those who participated in the intervention significantly improved their self-control skills and significantly reduced their aggressive behavior, as reported by multiple informants (i.e., students' self-reports and parents' and teachers' responses). The intervention program was associated with a very low dropout rate and an impressively high rate of maintaining outcomes at the two-year follow-up. Thus, the program was endorsed by the national Ministry of Education, which sponsored the program's implementation into the regular education system in central Israel.

This intervention model was unique in several ways. It focused on the acquisition of learned resourcefulness and strength-based skills. Its format resembled a scientific research course, taught by teachers in class. It integrated elements from art therapy, cognitive-behavioral therapy (CBT) techniques, and positive psychology. It utilized a small group setting and was implemented in youngsters' natural environment, led by the class teachers.

Sports-Based Intervention Program

Following the success of the empowerment program, we were interested to learn whether it is necessary to directly teach self-control methods when targeting aggressive youngsters or if similar outcomes could be achieved without direct training. Therefore, we designed a second targeted project utilizing a sports-based program and examined its efficacy in increasing youngsters' self-control skills and, in turn, reducing their aggression (Shachar et al., 2016). In line with Orpinas and Horne's (2006) call to study the protective factors or the developmental assets that have the "potential to improve the well-being of youth and to reduce aggression" (p. 34), we examined the protective role played by youngsters' high levels of self-control skills, positive emotions, and low levels of negative emotions. We reasoned that children's active participation in sports might serve as a venue for achieving social acceptance. Furthermore, because engagement in sports calls for the employment of self-control skills, we hypothesized that children who actively engage in sports activities would gain better control over their aggressive tendencies.

The study was part of a social-educational project established by the Rashi Foundation, with the funding and collaboration of the Children and Youth At-Risk Foundation of the National Insurance Institute (Bituach Leumi) and the education departments at the participating local municipalities. Thirty-nine elementary schools (N = 1047 students) participated in this sports intervention program: 25 from the north and 14 from the south of Israel. Approximately half of the schools ($n = 21$) were assigned to the experimental group, where the students participated in a 24-week intervention comprised of five hours a week of afterschool sports activities. The remaining schools ($n = 18$) were assigned to the waitlisted control group whose students received the sports intervention the following school year. The five hours of sports activities per

week included three one-hour sessions of various team-sports activities (e.g., football, basketball, volleyball) and two one-hour martial arts sessions, totaling about 120 h over the 24 weeks.

Compared to the wait-listed control group, the experimental group reported significantly larger gains in self-control skills and significantly larger decreases in physical aggression, hostile thoughts, and negative emotions. Results of the structural equation modeling analysis suggested that the gains in self-control were linked to changes in hostile thoughts, as mediated by changes in both positive and negative emotions. In addition, changes in hostile thoughts were linked to changes in physical aggression through the mediation of changes in anger. Among the girls, changes in self-control were linked directly to changes in physical aggression (with no significant indirect effect). Whereas among the boys, changes in self-control were linked indirectly to changes in physical aggression through changes in positive and negative emotions. This pattern of findings contributes to the understanding of possible mechanisms underlying the associations between children's self-control and aggression, with particular implications on positive and negative emotions (Shachar et al., 2016).

Music-Based Intervention Program

The success of the sports program led us to try and apply other methods to target at-risk youngsters with various challenges, including ADHD, high aggression, low achievements, low self-control, or low self-confidence. Together with the Israel Philharmonic Orchestra, we established an innovative and hope-instilling musical education program—the Sulamot Music for Social Change Project (hereafter referred to as Sulamot) for at-risk young children and youth in the peripheral areas and underprivileged communities of Israel.

The higher risk levels experienced by these youngsters from disadvantaged backgrounds were evident from our research comparing the at-risk children and adolescents who participated in Sulamot in their boarding schools to normative low-risk peers living with their families. Before we began the music intervention, we found a significant gap between these two groups to the detriment of the Sulamot participants, which appeared across all of the studied measures. Namely, children living in boarding schools scored much lower than children living at home on self-control, happiness, positive affect, and self-efficacy, and much higher on aggression indices. In all subscales of aggression—hostile thoughts, negative emotions, and aggressive behaviors—the Sulamot group revealed higher rates than their peers living at home with family. Notably, the Sulamot group also showed lower levels in all aspects of subjective well-being (including happiness and positive affects) and significantly lower levels of self-control compared to their peers living under normative conditions.

We view music as a fundamental tool in educating new generations and as an important potential means for social development. The ultimate goal of this ongoing music-based intervention program is to promote social change through the collective practice of music. This will be achieved by helping children and adolescents who are at-risk to flourish by playing music. Through music, we hope to help them experience

success and pride, learn to delay gratification, and enhance their ability to focus while playing on stage.

This joint project of the Israeli Philharmonic Orchestra and Tel Aviv University has been operating since 2010. To date, 3500 children aged 9–15 have participated in the Sulamot children's orchestras that we have established in school settings. Sulamot mentors and teachers accompany the children and adolescents for a minimum of three years and provides them with musical instruments, weekly individual lessons, weekly orchestra rehearsals, musical pedagogical supervision, and psychological supervision (see https://www.youtube.com/.watch?v=Fvk3_b_GWME). Students in the entire school participate—not only those who are musically inclined. Each child receives his or her own instrument to play, which we select based on our impression of what will be right for each child. Students from Tel Aviv University's School of Music come weekly to the schools to teach music together with trained musical teachers. Mentors from the Israel Defense Forces (IDF) unit for Outstanding Musicians arrive twice a week to practice with the students. The music lessons are conducted during school hours and in cooperation with the school teachers. After approximately six weeks from their first encounter with the instruments, the children come together and reach the level necessary to play in an orchestra.

We began by implementing Sulamot in boarding schools and institutions for children and adolescents at-risk. Several studies have been conducted to examine the efficacy of the program (Kaplan, 2010). Overall, these studies pinpoint the contribution of music to these underprivileged students in terms of decreasing aggression and increasing self-confidence, happiness and positive affect.

The most impressive research outcomes were noted in the comparison of youngsters' functioning at the beginning and after one year in the program. At the end of the first year of the project, we found that differences were already evident across all measures, such as a decrease in children's frequency of negative affect. However, the main change that emerged was that the youngsters significantly increased their ability to express positive emotions, such as joy, happiness, and pleasure. After only one year of playing music in this program, their rate of positive affect increased to the extent that it reached the level of positive emotion demonstrated by the low-risk group of children living at home with their families. By the end of the second and third year of program implementation, the at-risk youngsters did not differ from their low-risk peers, thereby showing reductions in aggression and growth in self-efficacy. Currently, we intend to follow up on the Sulamot program's long-term outcomes, which may be evident in the day-to-day realities of the lives of the participants. It is worth noting that the students who started the program in its first year (9 years ago) have already graduated high school. Some have gone on to specialize in music and succeeded in a music matriculation program leading to their high school graduation. Others joined local orchestras or became musicians in the army.

Conclusion and Implications

This chapter presents the importance of well-being in childhood and adolescence as it relates to ordinary and extraordinary risk factors that may be encountered during these periods. Furthermore, it elucidates the importance of boosting well-being for both low- and high-risk youngsters. It also discusses the cultural characteristics of Israeli children and adolescents (both Jews and Arabs) and components that can facilitate flourishing. It also reports on the nature and efficacy of the various intervention projects espousing a positive psychology approach and focusing on low-risk and high-risk populations in Israel.

The review of intervention studies that focused on addressing behavioral disorders among children and adolescents at-risk (e.g., Orpinas & Horne, 2006; Wilson et al., 2001), provided some important insights regarding the optimal characteristics of intervention programs that can help at-risk youngsters flourish. First, interventions should be given early in life to at-risk children, namely, to students in the younger grades who already manifest disorders (Connor et al., 2006).

Second, to enhance the generalization of new skills to naturalistic settings, the intervention should be conducted within the school system and by teachers. In fact, Wilson et al. (2001) reported that programs delivered by teachers were more effective than those delivered by research staff. We believe that intervention programs must be appealing to teachers and students to ensure optimal adoption as part of regular school programs. Highly effective programs that make the lives of students and teachers too cumbersome will be short-lived, as often witnessed with various "one-shot" programs.

Third, interventions should concentrate on three major directions of training: helping youngsters to apply self-control skills, reduce negative affect (especially anger), and learn to express positive emotions. Past research has clearly demonstrated a negative link between self-control skills and hostile cognitions and anger, which are the precursors of aggressive behavior (Ronen & Seeman, 2007). In the last decade, we also documented the contribution of self-control skills in facilitating positive emotion (Orkibi & Ronen, 2015). Reducing anger, negative thoughts, and risk is not enough if we cannot impart children and adolescents with positive skills and resources, such as those focusing on positive emotions, meaning, goals, and support. For example, at-risk children and adolescents may require help to acquire prosocial and friendship skills. As a social phenomenon, emotions should be taught in groups, within a social context where youngsters can practice the necessary skills.

The studies and projects that we have conducted over the years underscore the importance of a positive psychology approach for children and adolescents, especially for those at-risk. We have seen that at-risk youngsters are clearly capable of easily learning the necessary skills and even enjoy the learning process. Such skills can be taught directly as lessons. However, they can also be imparted indirectly via joyful activities like sports and music, which develop self-control, model desired behavior changes, and provide opportunities to enjoy being together, expressing emotion, and sharing with friends.

The projects presented in this chapter were conducted specifically with Israeli children. However, they address the general characteristics of the needs of children at-risk as well as the content of successful intervention projects. Therefore, the suggested interventions should be applied in other cultures to further understand their potential.

We have come a long way in developing effective evidence-based positive intervention efforts for students facing social and emotional risk factors. However, positive psychology should not be limited only to programs for reducing difficulties and fostering happiness and self-control among at-risk children. Instead, this should become an approach of choice within regular educational activities, starting early in preschools and kindergartens and continuing throughout the school years to promote the well-being of young people as a predictor of their flourishing as adults in society.

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Chapter 21
The Application of Positive Psychology and Positive Education in Schools: Moving Forward in Asia

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The recent COVID-19 pandemic has highlighted how students' learning and well-being are inextricably related; this insight has been the core assumption of positive education (Seligman et al., 2009). Although this edited book was planned and initiated before the start of the pandemic, its chapters capture the growing enthusiasm and a real momentum of work applying positive psychology principles in schools in different parts of Asia.

The focus on positive education in Asia is significant in at least two ways. First, a quick glance at the published literature will indicate that research and application of positive psychology has been predominantly focused on WEIRD societies, or societies that are western, educated, industrialized, rich, and democratic (Henrich et al., 2010). This edited book features 19 chapters that involve students and teachers from diverse Asian countries and territories: China, Hong Kong SAR, Israel, Japan, the Philippines, Singapore. While these represent a small portion of countries in Asia, the studies also draw from the diverse types of schools, students and teachers in these countries and territories; thus, adding much needed diversity in the positive psychology and positive education research literature and extending the generalizability of the pertinent concepts and principles. While the generalizability of positive education principles is an important concern, the second way that the focus on positive education in Asia is significant relates to when such principles may not generalize to all cultures and educational systems. Studying positive psychology and positive

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education among diverse Asian students and teachers also points to how sociocultural processes may be influencing the meaning, processes, and outcomes of positive education. There have been published studies that already point to how the processes and factors relating learning and well-being in different groups of Asian students diverge from what the research involving western students indicate (see, e.g., Ahn et al., 2016; Bernardo et al., 2018; Caleon et al., 2019; King et al., 2015). We will discuss this point more deeply later in this chapter as it is one of the important themes that emerge from the chapters of this edited volume.

In this concluding chapter, we summarize the important themes that cut across the different chapters that are most relevant for teachers, curriculum developers, school heads, school counselors, psychologists, and other professionals working in schools. While we focus on important themes for practitioners, we wish to clarify that these themes also have implications for the theoretical precepts of positive education. But we believe that highlighting the themes for practitioners will go a longer way towards promoting positive education across schools in the Asian region.

Character Strengths as Foundations for Promoting Learning and Well-Being

One of the key themes that runs through numerous chapters of this volume relates to how character strengths are important scaffolds for student learning and achievement. This proposition has long been suggested in the western research literature: Character strengths have been found to be robustly linked with well-being indicators (Park et al., 2004) and the indirect relationship between character strengths and achievement was found to be mediated by students' classroom behaviors, motivation, engagement in and enjoyment of learning tasks (Wagner & Ruch, 2015; Wagner et al., 2020). Thus, the development of specific character strengths is not just a valuable educational goal of positive education, but it is equally important to note that character strengths are associated with learning motivations and behaviors that are known to be contributors to learning and achievement. This proposition is the basis of important proposals to target character strength development in counseling and psychological interventions for students (Park & Peterson, 2008).

While there have been previous empirical studies supporting this important role of character strengths in achievement of Asian students (see, e.g., Datu & Mateo, 2020; Tang et al., 2019), several chapters in this volume extend the evidence and implications related to this important proposition as it relates to specific vulnerable student groups. In their study comparing low-ability and high-ability groups of middle school students in China, Chen et al. (2023) found that different character strengths of inquisitiveness, self-control, and belongingness were uniquely associated with each group and their school adjustment. Their study showed how these character strengths can compensate for the socioeconomic disadvantage of students in low-ability groups. In another study, Chen (2023) showed how the character strength of grit can boost

positive development of migrant children in Eastern China when paired with other protective factors like social support and temperamental effortful control. Especially as these can buffer the risk factors that migrant children face in school such as social discrimination, achievement disparity, and adjustment difficulties.

This role of character strengths as protective factors for students was also highlighted in the study of Caleon et al. (2023), which adopted a qualitative approach to examine Singaporean students' academic resilience including the protective factors and mechanisms that facilitate its development. These include goal-directed cognitions, managing failure, and social support. Two chapters pushed the argument of the important role of character strengths further by showing the efficacy of interventions that target particular character strengths in students. Nalipay et al. (2023) described their gratitude intervention for students that was aimed at bolstering both well-being outcomes and skills for their academic achievement. Lee and Jing (2023) also discussed the important role that schools and teachers have in creating a harmonious environment for students to develop kindness and a sense of belonging in primary school students in Hong Kong.

Effectiveness of Positive Psychological Interventions in Schools

Positive education has been proposed as an important approach to enhance students' well-being and learning in schools, and positive psychology interventions (PPIs) have been suggested as important activities that can be integrated in schools as an integral component of positive education programs. Over the years, the benefits and limitations of PPIs on student learning and well-being have been documented (Chodkiewicz & Boyle, 2016; Shankland & Rosset, 2017), and PPIs that focus on character strengths have been a strong focus of research studies (Caleon et al., 2017; Lavy, 2020). As expected, much of the research on PPIs involve samples from WEIRD societies (Hendriks et al., 2019), and the few published studies on PPIs involving Asian students did not always find evidence for the effectiveness of such interventions. While some PPI studies were found to be effective in shaping more adaptive student learning behaviors and motivations (e.g., Datu et al., 2021; King & Datu, 2018), others observed no significant positive changes resulting from PPIs (e.g., Khanna & Singh, 2019).

These trends suggest the need for further research on PPIs with Asian samples and several chapters in this volume represent important steps in this direction. For example, we earlier referred to the effectiveness of Nalipay et al.'s (2023) gratitude intervention. Such positive evidence is not isolated. In their systematic review of five studies conducted with preschools across Asia (Jordan, Korea, Singapore and Israel), Sun et al. (2023) showed the effectiveness of shared book reading on boosting socio-emotional learning in the school setting. They found that educators can use this approach to promote cultural awareness and empathy at a young age and build on

intrapersonal and interpersonal skills. In addition, Khng (2023) discussed other techniques that work hand-in-hand with socio-emotional learning such as deep breathing and mindfulness-based practices. While deep breathing is centered on the regulation of physical reactions, the second works on the regulation of cognitions and attention. She described these simple techniques as nurturing self-regulation and well-being from the "inside out."

Aside from specific techniques and strategies, teaching styles can also lead to more positive student motivation; Lam (2023) reported the findings of her study on teacher autonomy support in Hong Kong. She found that the Confucian values like 'jen' (benevolence) and 'yi' (righteousness) were embedded in teachers' classroom behavior along with cultivating student interest, enriching support and a sense of mastery.

Positive Psychology Interventions for Early Prevention

Discussions on the effectiveness of PPIs have tended to focus on their effects on students' motivations, behaviors, and learning achievement. However, such PPIs are also proposed to play an important role in developing protective factors against different forms of psychological distress (Terjesen et al., 2004), in addition to its possible function in remediation. The role of PPIs in early prevention has been highlighted during the COVID-19 pandemic (Waters et al., 2022), but even prior to the pandemic, there has been documentation of the effectiveness of PPIs for prevention (Owens & Waters, 2020; Tejada-Gallardo et al., 2020). But as we can expect, such studies have mostly involved students in WEIRD societies.

A couple of chapters in this volume provide detailed insights regarding prevention-focused PPIs. Ronen (2023) discusses the risk factors that children and adolescents encounter and further contextualizes this with the Israeli (Jews and Arabs) cultural components that affect their well-being. She also discusses the empowerment intervention plan that is implemented in the regular education system in central Israel along with a sports-based and music-based intervention program; it was found that interventions should focus on self-control skills, reduction of negative emotions, and expression of positive emotions. She highlights the need for early interventions not just to mitigate distress but also to promote flourishing. In a similar vein, Chye et al. (2023) propose their multi-tiered intervention for mental health with the first tier assuming a prevention approach and the second tier, a remediation approach. Using telehealth counselling, they are able to envision their positive psychology-based program (i.e., A-MINDSET; referring to Accomplishment; Meaning; Interconnectedness; eNgagement; Discovery of self; Strengths; Emotional Wellness) in the Singaporean context.

Holistic Perspective and the Whole-School Approach

Some of the criticisms of positive education approaches have focused on the seeming emphasis of changing students' beliefs, thoughts, and other personal experiences, while ignoring the instructional and social contexts within which the students function. In response to such criticisms, proponents have advocated for a contextual positive education (Ciarrochi et al., 2016), that also emphasize not just the engagement of individual students and teachers, but also various levels of regulatory and governance functionaries in the school (Francis et al., 2021). Thus, rather than isolated interventions, there has been interest in adopting a whole-school approach to positive education (O'Connor & Cameron, 2017).

Several chapters in this volume also adopt a holistic approach to positive education by proposing a whole-school approach. A number of schools in Asia are joining the movement of incorporating positive education focusing on multi-dimensional models of well-being (e.g., PERMA model of Seligman, 2011). Kibe (2023) concisely reviews some of the efforts to apply positive education on a large scale. Several studies on the implementation of the whole-school approach had common procedures such as assessment of the needs of the school, setting goals, developing, modifying and implementing the curriculum, and continuously evaluating and involvement of relevant stakeholders. In a study involving a secondary school in Singapore, Lim and Chapman (2023) adopted a qualitative approach to focus on the educators' perspectives on positive educational practices. They found that based on the general tenets of the consortium, strategies include positive discipline, leadership development, rituals, positive class culture, positive communication through character and citizenship portfolios and student-led forums, affirmation, and relationships. These impacted both the educators and students. The educators became more self-reflective and aware of their sense of purpose. While the students became development-oriented (as opposed to event-focused), their academic performance improved and their outlook on their responsibilities changed for the better. In their study, Caleon and Chua (2023) present a positive approach to crafting a well-being curriculum in a public primary school in Singapore. Aside from proposing a framework (i.e., THRIVE—thinking mindfully, healthy coping, relating well, being in the moment, values driven-actions, and emotions of positivity; which is focused on students' flourishing), strategies were employed to promote competence and relatedness in the school administration, teachers, and staff. These include empowering them to be active role models, offering professional development programs to be equipped with aspects of positive education, and explicitly linking learning to the framework. They found that this school-wide approach was able to create a culture of well-being in the environment and holistic development in the students.

Focusing on Learners: Understanding Individual Differences

While we emphasized the importance of the school contexts in positive education, several chapters in the volume still highlight the need to focus on how individual students' perceptions and beliefs influence how they construct and engage the positive psychological concepts and positive education activities in their schools. This focus on understanding how the learner notices and negotiates between personal (inner) and social (outer) experiences in school is also emphasized in contextual positive psychology models (Ciarrochi et al., 2016).

Some chapters in this volume point to the individual differences learners have and the effect these differences can make on functioning, intervention, and learning outcomes. Sumi and Sumi (2023) focused on the relationship between perceived need support and need satisfaction in Japanese university students learning Arabic language. They found that when students perceived their environment as supportive for the needs of autonomy, competence, and relatedness, they experienced greater satisfaction in those needs. They suggest that need support can nurture students' motivation and well-being through the mechanism of need satisfaction. Aside from differences in how students perceive their learning environment, individual differences in how students may perceive instructional activities are also important to consider. Frondozo and Yang (2023) focused on how Filipino university students' perceptions of feedback were associated with positive and negative learning outcomes. Among the four dimensions of feedback orientation, feedback self-efficacy was the strongest predictor of positive emotions; students who were confident in using the feedback they got from their teachers were more likely to experience joy, hope, and pride.

Aside from differences in how students perceive their learning tasks and environments, individual differences related to personality are also important to consider in considering positive education interventions. Kibe (2023), in her study of Japanese adolescents, investigated how differences in susceptibility was associated with mental health and intervention outcomes. At the baseline, higher susceptibility negatively predicted resilience, self-esteem, and self-efficacy and positively predicted depressive symptoms. Interestingly, after the resilience program, those who had higher susceptibility showed better resilience than those who had lower levels of susceptibility. Similarly, Chen (2023) explored the role of temperament in fostering grit. In a study of migrant children in Eastern China, the children's' innate effortful control positively predicted their use of grit which underscores the importance of developmental process of personality traits.

The Role of Relationships with Significant Others

Consistent with the holistic perspective in positive education, it is not surprising that significant persons in the students' life—parents, friends, and teachers—play important roles in different positive education and positive psychological processes.

Teachers' emotional support and positive relationships with students have been shown to be critical factors associated with the effectiveness of PPIs for younger elementary students (Quinlan et al., 2018; Suldo et al., 2015) and adolescent high school students (Ruzek et al., 2016). There has also been cross-cultural research that shows the differing influences of social support of families and peers on students' well-being (Brannan et al., 2013).

It is not surprising that in Asian societies that emphasize relationship and interdependent self-construals, we find strong interest in the role of significant others in positive psychological experiences in schools. We see several expressions of this theme in the different chapters. Aside from innate personality traits of a migrant child (as discussed in the previous theme), Chen (2023) also found that mother and teacher supportive behavior uniquely contributed to a child's grit in their home and school environments. Support from mothers which involved a general sense of guidance was positively related to the child's consistent interest in learning; on the other hand, support from teachers which included more concrete instruction was positively linked to a child's continuing effort to enact their long-term goals. Bernardo and Cunanan (2023) also show how a student's hopeful thoughts expressed not just personal agency, but also conjoint or shared agency with their significant others. In a study of Filipino high school and college students, they used the locus-of-hope model to examine a relational view of hope. Interestingly, they found that the different loci-of-hope may act in a compensatory manner; for example, when external-peer locus-of-hope and internal locus-of-hope are not enough, a student may look to their family to promote their own agency and pathways to their goals. It is valuable to recognize how one's more secure sources of hope can compensate for the weakness of the others. Ronen (2023) found that for at-risk children and adolescents, their loved ones may serve as reliable partners to lean on when they are under pressure. In her discussions of workshops, she discusses how parents and family members can join in on activities for their children to develop resilience. These involved mindfulness, emotional sharing, positive thinking and behavior.

Cultural Meaning of Well-Being

In recent years, there have been advocates of a cross-cultural positive psychology, or a positive psychology that pays more careful attention to the cultural dimensions and variations in how flourishing, well-being and other positive psychological experiences are given meaning (Lomas, 2015). In a manner of speaking, the argument of embedding positive psychological propositions within cultural systems is an extension of the holistic approach to positive education that understands that positive psychological processes are not just personal internal experiences, but experiences that are integrated in different layers of social contexts, including the broader culture in which the students and schools exist (Lomas et al., 2021).

This theme was not strongly articulated in most of the chapters in this volume. But two studies explicitly elucidate the cultural meaning of well-being in the specific

Asian educational context. Chue (2023) called attention to the inherent cultural biases in the assessment of well-being in Asia given that most instruments were developed and validated in western contexts. He used Hofstede's cultural dimensions to examine how Asian cultures emphasize different values for flourishing. Compared to those in individualistic societies, those in collectivistic societies might value social relationships more; therefore these are much more encouraged in schools through cultivating a sense of belongingness among the students. He also discusses that compared to feminine societies which focus on quality of life, masculine societies place more importance on a sense of accomplishment. Cultural biases may lead to methodological issues in measurement; time-based questionnaires may not give accurate perception of flourishing in comparing societies with long term orientations and short term orientations. Social desirability bias is an issue when asking those in indulgent societies and restrained societies about their levels of happiness. In Kibe's study (2023), she discussed the ways socio-cultural contexts can influence perceptions of well-being and culturally adapts a western-made resilience program to Japanese high school students accordingly. She took care to make two major changes to fit into the cultural context. First, case studies were changed to be more relevant to Japanese students. Second, to encourage students to willingly participate in the program, they switched the sequence to emphasize emotions first rather than cognitions. This was done since Japanese culture emphasizes relational aspects more than analytic aspects and adolescents are more likely to actively participate if they are engaged with their heightened emotionality.

Conclusion

These are key messages to educational professionals who are interested in exploring and adopting positive education and positive psychological principles in their schools and school systems. First, character strengths and other positive psychological constructs are not just additional education outcomes to be considered; instead, character strengths enable the attainment of learning outcomes. They make a difference in students' attainment of the curricular objectives in the different domains of learning, so educators who ignore character strengths are turning their backs on a potentially powerful factor in student achievement.

Several key messages relate to positive psychological interventions (PPIs) in schools. First, there is evidence that they work. Second, they work not just to remediate deficits in the positive psychological concepts, but they develop protective mechanisms that enable students to better withstand the effects of different forms of psychological distress. Third, they work better if they not only focus individual students' inner personal experiences; PPIs work if they are aligned with the different aspects of the students' educational experiences and all educational actors engage with the basic principles of the PPI. Fourth, teachers, friends in school, and parents have diverse but important roles in supporting and sustaining PPIs. And fifth, individual differences in students moderate how they might engage in these PPIs. These

five points altogether highlight the need to engage positive education in a holistic way, understanding the role of different actors (i.e., not just the student) to fully appreciate the positive impact in the students' well-being, learning, and achievement.

The last theme that we observed was the least strongly articulated across the chapters, but potentially one that is most critical for educational professionals in Asian societies who wish to engage positive education and positive psychology for their schools. There has been a recent but thoughtful push to focus on how different cultures might give meaning to positive psychology concepts, and positive education practitioners in Asia need to be more mindful of how cultural norms, values, and meanings systems might be shaping how student and teachers in different countries and cultures perceive and experience positive education.

In relation to the last point, we wish to underscore that the Asian research represented in this volume is by no means representative of the varied range of Asian educational systems and cultures. Nevertheless, the 19 chapters in the volume provide a diverse snapshot of a few Asian societies, and how educators and psychologists in schools in these countries and territories are trying to make positive education take root in Asia. We hope the readers of this volume will appreciate how the chapters of this volume have effectively made the case for the viability and relevance of positive education in their respective educational contexts. More importantly, we hope the readers of this volume recognize how the application of positive education approaches are feasible in different scales of intervention that can be integrated in different classroom and extra-curricular activities of students.

The various chapters in this volume collectively underscore the prospect that positive education and positive psychology may help in achieving the goal of having every student attain their full potential—a goal that is shared by all educational systems in Asia. But the prospect is currently still limited to particular countries and territories in Asia, while positive psychology and positive education remains a vague concept treated with skepticism in other Asian educational systems. Advocates of positive education and the application of positive psychology in schools must continue to document evidence on the relevance of positive psychology concepts and the effectiveness of positive psychology interventions in Asian schools, so it will become more apparent that positive education is not just the current fad, but a true opportunity to achieve all students' full potential.

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