

Mindfulness programs in education are complementary with school-based approaches that foster social–emotional learning (SEL); educators can draw from evidence on SEL programming when choosing, implementing, and sustaining a mindfulness program in the school context.

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Mindfulness in practice: Considerations for implementation of mindfulness-based programming for adolescents in school contexts

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The faculty of voluntarily bringing back a wandering attention, over and over again, is the very root of judgment, character, and will. No one is compos sui if he have it not. An education which should improve this faculty would be the education par excellence. But it is easier to define this ideal than to give practical directions for bringing it about.

The Principles of Psychology (1890)¹

SCHOOLS HAVE LONG been identified as contexts that can play a vital role in fostering children’s positive development.² Recent empirical evidence has revealed schools to be one of the primary settings to implement primary prevention initiatives, in particular those that promote social and emotional learning (SEL).³ Increasingly, school-based primary prevention efforts are incorporating mindfulness-based practices to foster attention, resiliency, and well-being.⁴ Mindfulness-based initiatives in education have

much in common with the goals of SEL, a field with an established research base regarding best practices in program development and implementation.⁵ SEL involves the instruction of five major competencies: self-awareness, self-management, social awareness, relationship management, and responsible decision making.⁶ In their review of the potential role of contemplative practices in education, the Mind and Life Education Research Network (MLERN) proposed the complementary role of mindfulness and SEL programming.⁷ Specifically, both mindfulness and SEL require consistent opportunities to practice. In the case of mindfulness, this would entail time for contemplative practice (for example, mindful awareness, deep breathing exercises).

Contemplative science is a transdisciplinary effort spanning cognitive neuroscience, developmental psychology, phenomenology, and psychiatry.⁸ As described in the first chapter of this special volume, contemplative science is an emergent area in education. The development of best practices in this field is in a nascent stage, leaving a gap in our understanding of how best to utilize mindfulness in school settings. To help close this gap, and inform the emerging area of contemplative education, much can be learned from the literature on successful SEL program implementation and sustainability. This chapter seeks to provide guidance to educators, through the lens of high-quality SEL program implementation, on how mindfulness-based programming can be implemented in schools with efficacy and sustainability.

The growth of mindfulness-based approaches is spreading both nationally and globally.⁹ Educators seeking mindfulness-based or contemplative educational programs can look to the Garrison Institute's Contemplative Education Database (www.garrisoninstitute.org). The database was created, in part, to aid educators in finding contemplative education programs within their geographic area within the United States and Canada. To be included in the database, programs are required to be: (1) designed for children and adolescents in pre-K through grade 12 or their educators; (2) secular; (3) in existence for a minimum of one year; (4) implemented regularly over the past year with pre-K through

grade 12 students, or to have carried out a training program with educators over the past year; (5) based upon an identifiable curriculum guide or model that is appropriate for use in public pre-K–12 school settings in North America.

Table 5.1 summarizes two mindfulness-based programs designed for adolescents. The programs selected have curriculum and resources that are available for school-based implementation, are theoretically derived and research-based, and have at least one peer-reviewed published empirical research study conducted with a nonclinical adolescent population within a school context. The programs reviewed here are: The Mindfulness in Schools Project (.b) and MindUP™.¹⁰

Mindfulness practice in adolescence: What does the research say?

Over the past ten to fifteen years of research efforts, evaluations of the effectiveness of mindfulness approaches targeting children and youth have increased. A number of reviews have been published that summarize the findings of mindfulness-based interventions for children and youth, along with a recent meta-analysis examining the overall effectiveness of mindfulness approaches with adolescent populations.¹¹ For the purposes of this chapter, the focus is on evaluation studies of school-based mindfulness programs with nonclinical adolescent samples within school contexts, as such, the following research review includes the evaluation studies of the programs reviewed in Table 5.1.

The Mindfulness in Schools Project (.b) was evaluated with a group of typically developing adolescents (twelve to sixteen years).¹² In this nonrandomized parallel group designed study, the treatment group received the .b program from January to March 2012. Outcomes, including well-being, mental health, stress, and mindfulness practice, were assessed at baseline, postimplementation, and at a three-month follow-up. Findings at posttest revealed

Table 5.1. School-based adolescent mindfulness program overview

<i>Program</i>	<i>Web site</i>	<i>Implementation</i>	<i>Overview</i>
The Mindfulness in Schools Project (b)	www.mindfulnessinschools.org	Nine secondary school classroom-based lessons	.b (pronounced dot-b) refers to “stop, breathe, and be.” Via mindfulness training the program aims to support students’ well-being, relationship skills, concentration, anxiety and stress management, and performance in academic and extracurricular activities.
MindUP™	www.thehawnfoundation.org	Fifteen lessons taught approximately once a week; the core mindfulness practice (done every day for three minutes three times a day) entails focusing on one’s breathing and attentive listening to a single resonant sound	MindUP (K–8) is a social and emotional learning program that incorporates mindfulness-based practices, and also draws from neuroscience and positive psychology. The program begins with a lesson on the brain, followed by sensory experiences (for example, mindful listening, smelling, and tasting) to cognitive experiences (for example, perspective-taking, learning optimism), ending with students reflecting on what they are grateful for in their own lives, and enacting random acts of kindness and community service.

a significant reduction in depression for the intervention group, in comparison to controls. Follow-up findings included significant reductions in depression and stress, and a greater sense of well-being among treatment adolescents versus controls. In addition, mindfulness practices were significantly associated with well-being and lower stress.

A quasi-experimental study was conducted on an earlier version of MindUP™ titled *Mindfulness Education (ME) program*, with 246 fourth- to seventh-grade students (11.4 years) attending elementary schools in a large public urban school district.¹³ Students completed pretest and posttest self-report measures assessing optimism, general and school self-concept, and positive and negative affect. In addition, teachers rated students on dimensions of classroom social and emotional competence. Results revealed that students who participated in the ME program, compared to those who did not, showed significant increases in optimism from pretest to posttest. Similarly, teachers reported improvements of socially competent behaviors in students who participated in the ME program, compared to those who did not. Medium to large effect sizes were reported. Regarding implementation, teachers reported that the core breathing practice (done three × a day across all nine weeks of the program) was easy to integrate into their regular classroom curriculum, and hence their implementation of the core mindfulness activities was high (73–100 percent, with an average of 87 percent across the nine weeks).

More recently, a Randomized Controlled Trial (RCT) of the revised program, now called MindUP™, was conducted with four classrooms of combined fourth- and fifth-grade students ($N = 99$), who were randomly assignment to receive the program or a business as usual (BAU) curricula that focused on the promotion of social responsibility.¹⁴ Prior to and following program implementation, students completed self-report measures assessing their social–emotional competencies, and well-being, and also completed behavioral assessments of their classmates' prosocial and aggressive behaviors and rated how much they liked their classmates. In addition, students' diurnal cortisol, a stress hormone,

was collected via saliva, and students completed an objective measure of executive functioning (EFs). Results indicated that students in the MindUP™ classrooms improved more in cognitive control, optimism, empathy, perspective-taking, school self-concept, and mindfulness, and maintained a more regulated diurnal rhythm of stress regulation than students in the social responsibility only classrooms. Moreover, children who received MindUP™, showed greater decreases in depression and aggression, and were rated by peers as more trustworthy, kind, and helpful, and had higher acceptance from their peers in contrast to comparison students. Medium to large effect sizes were reported.

Considerations for implementation of school-based mindfulness programs

Mindfulness-based approaches are becoming more common in education to promote myriad of outcomes including resiliency, well-being, self-regulation, and attention. Educators looking to employ mindfulness-based programming in their schools should give careful consideration to how the program will be implemented in order to ensure program fidelity and sustainability of the program within the school context. However, this is not a straightforward task due to the nascent stage of contemplative science in education—a field with limited research available on best practices for implementation. To help address this limitation, educators can look to the field of SEL for guidance on effective, sustainable program implementation.¹⁵ Key ingredients for successful program implementation include, but are not limited to: a focus on the teacher and ongoing professional development, high-quality implementation, and ongoing evaluation of program effectiveness.¹⁶ One organization that has led the charge in the promotion of SEL is the Collaborative for Academic, Social, and Emotional Learning (www.casel.org). Educators can find many valuable resources on the CASEL Web site, including the *CASEL Guide for Effective*

Social and Emotional Learning Programs. The following section reviews key ingredients for successful SEL program implementation with special consideration given to school-based mindfulness efforts.

Ingredients for successful program implementation

Educators looking to adopt programming to meet students' social and emotional development should become familiar with the research regarding successful program implementation in order to adhere to best practice and ensure successful program delivery. The importance of teacher characteristics, high-quality implementation, and ongoing evaluation are three areas that have arisen from implementation science as key components to program success.

A focus on the teacher

How might teacher characteristics affect the delivery and impact of mindfulness-based programming? Empirical evidence continues to accumulate that speaks to the important connection between teachers' well-being and student outcomes.¹⁷ Positive classroom environments, including positive student–teacher relationships, are indeed critical for student well-being and learning outcomes. In recent years, programs have been designed to address teacher reported stress, burnout, and attrition.

A current question within the field of contemplative education pertains to whether programs should focus on providing *teachers* with mindfulness skills, or should programs be targeted to *students*? This question puts forth a chicken or egg conundrum. Should efforts focus on teachers, students, or both, and in what order? Again, the field of SEL can help unpack this question and provide some guidance.

Successful student SEL has been found to be inextricably linked to teachers' SEL skills.¹⁸ Better student–teacher relationships and student outcomes are possible when teachers have stronger SEL competencies.¹⁹ Research has found that better implementation

of SEL curricula occurs when a teacher has robust SEL competencies.²⁰ Research investigating teacher-focused mindfulness programming has revealed benefits such as increased mindfulness, reduction in stress and burnout, and improvements in teacher competency.²¹ Can a mindfulness-based program designed for teachers also have a trickle down effect for students? Recent research indicates this may be the case. One study with preschoolers and their teachers found improvements in student behavior following a mindfulness-based intervention for the teachers.²²

While the research literature catches up to the explosion of interest in adopting mindfulness approaches with children and youth, educators can look to research on SEL programming to help guide decision making around program selection and implementation.²³ With the relation of teacher social emotional competence and student outcomes in mind, school staff should consider the needs of all members of the school community prior to selecting a mindfulness-based program. For instance, is the primary need supporting teachers or staff with training in stress management and social emotional competence? Or, is the primary need of the school community to promote resilience in students? Can both be achieved simultaneously? Indeed, integrative models that include programs for teachers (for example, SMART and CARE) along with SEL classroom curricula might have synergistic effects.²⁴

High-quality implementation

Important first steps for successful adoption and sustainability of any school-based prevention program include careful consideration of the needs of the school community, and selection of high-quality programming. However, the field of SEL implementation science has revealed that simply choosing a high-quality program does not guarantee its success.²⁵ Research has revealed that poor program implementation can adversely affect the program's effectiveness, including outcomes for students.²⁶

With regard to program delivery, instructor competence needs to be at a professional standard in order to preserve the integrity of

the mindfulness practices included within programs.²⁷ This may be particularly relevant in the field of mindfulness in education, given that a large number of young people with no previous exposure to mindfulness are being reached, and many may be participating in the programs without choice (for example, as part of the school curriculum). Educators who are looking to bring mindfulness into their educational contexts need to consider the issue of instructor competence when making a program selection.

A recent study examined the relation of student social and emotional competencies to the training, dosage, and implementation quality of an evidence-based SEL program.²⁸ Findings indicated that students had more positive outcomes when their teachers attended more training, taught more lessons, and were classified as moderate- or high-quality implementers. Further, a concerning finding revealed that students of low-quality implementers had negative outcomes on measures of social and emotional competencies. These findings, taken together with the evidence linking teacher social emotional skills to student outcomes, highlight the critical importance of competency of instruction for school-based mindfulness-based programming.

Ongoing evaluation of program effectiveness

Competent instruction, district and school support including both a shared vision and buy-in among school staff, and consistent support from administration are critical ingredients to promote high-quality implementation.²⁹ In addition, Bond and Carmola Hauf indicate in their review of the characteristics of effective programs that the strength, capacity, and resources of interventions need to be assessed ongoing in order to achieve successful outcomes.³⁰

Best practices in SEL program implementation strive for the adoption of evidence-based programming.³¹ When examining the options for mindfulness-based program for adolescents, most do not have any rigorous research that attest to the program's effectiveness. For example, a search with criteria limiting results to program targeting adolescents (grades 6–12) on the Garrison

Institute's Contemplative Education Database revealed thirty-four programs, however, only four of the thirty-four programs have research demonstrating effectiveness published in peer-reviewed academic journals. Indeed, many of the programs listed do have programs of research in progress; however, they are in earlier stages of research and dissemination of findings. This poses a challenge for educators seeking looking to implement an evidence-based program that is available in their particular region.

Overall, important characteristics of successful prevention programs are that they are guided by theory and research-based. In addition, successful programs incorporate findings from program evaluations to improve the efficacy of program components and delivery ongoing.³² Although the field of contemplative science needs time to rigorously test mindfulness-based programs for children and youth, educators currently seeking programs need to become critical consumers of the research supporting claims around program effectiveness, and investigate the current state of research for each particular program under consideration.

School-based mindfulness programs are a promising approach for children, youth, and their educators. The field of mindfulness in education is still emerging, both in practice and research, and best practices are not yet firmly established. Questions remain around timing of approaches, developmental considerations, and experience and training in regard to instructor competency.³³ In addition, the number of programs available far exceeds the available research in support of each approach. Indeed, more research is needed to establish a robust selection of high quality, evidence-based programming for educational settings. Although the field continues to expand the research base on best practices for implementation quality and sustainability, educators navigating the incorporation of contemplative education in their school context can look to the field of SEL for guidance toward achieving high-quality implementation and sustainability of programming.

Notes

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