



Mindful and Creative: Building Educational Systems for Individual and Community Wellbeing

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Accepted: 17 January 2022
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Keywords Creativity · Mindfulness · Educational technology · Schools · Teaching · Wellbeing

Mindful and creative, a child who has neither a past, nor examples to follow, nor value judgments, simply lives, speaks and plays in freedom. ~ Arnaud Desjardins

Inside you there's an artist you don't know about. ~ Rumi

The quieter you become the more you are able to hear. ~ Rumi

Everything is created twice, first in the mind and then in reality. ~ Robin S. Sharma

Introduction

In this issue, we diverge from our typical column approach where we interview notable creativity researchers to explore their perspectives. Instead, while our discussion still focuses on creativity (with connections to technology and education), it does so in a way that explores creativity in relation to mindfulness. Mindfulness has recently received attention across scholarly and popular discourse (King & Badham, 2018). It is often defined as a state of “nonjudgmental, moment-to-moment awareness” (Kabat-Zinn, 1990, p.2), and practiced via meditation or similar techniques to help focus the mind or develop awareness of one’s own experience. Like creativity, mindfulness has been studied across disciplines like psychology, physiology, healthcare, neuroscience, the arts, and others—and an emerging area of mindfulness research has considered its connection to creativity.

In education discourses, creativity and mindfulness have been topics of increasing interest related to twenty-first century learning paradigms. In a technology-immersed world awash in distraction, stress, and often, distress—all of which can affect creativity and wellbeing—mindfulness becomes a valuable consideration for supporting learners in educational practice. After nearly two years of an ongoing pandemic that has taxed the emotional and mental wellbeing of schools, teachers, students, and society—mindfulness is an important topic to consider at the start of this fresh year. It is also an area that we, as researchers, have increasingly investigated recently (Henriksen, Richardson & Shack, 2020; Henriksen & Gruber, 2021; Henriksen & Shack, 2020; Henriksen, Heywood, & Gruber, 2022a; Henriksen et al., 2022b). In this article, we look at the relationship between mindfulness and creativity grounded in existing research, then share some of our current work and thinking around possibilities and practices for education, concluding with implications related to technology.

What is the Relationship Between Creativity and Mindfulness?

Mindfulness has been described as the ability to be fully present, aware of what is happening, and not overly reactive or overwhelmed by what is going on around or inside of you (such as thoughts, emotions, or body sensations). Berkley’s Greater Good Science Center (n.d.) suggests, “Mindfulness means maintaining a moment-by-moment awareness of our thoughts, feelings, bodily sensations, and surrounding environment, through a gentle, nurturing lens.” Despite the simple, intuitive nature of common mindfulness definitions, remaining present and open to direct experience is rarely simple and may even be fraught with internal resistance.

Researchers have studied interventions related to different components of mindfulness, often through its most common

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practice of meditation. Because meditation involves specific practices to develop awareness of one's own mind and experience, it provides an intervention to study the development and effects of mindful states, helping people connect with thoughts and emotions in the present moment (Shapiro, 2009). Research has shown that by developing awareness about one's mind and the present moment, people experience less anxiety, more positive emotions and engagement, and other mental and emotional benefits (Weinstein et al., 2009). In becoming more aware of their thinking, learners can become skilled at navigating thought processes in psychologically healthy ways (Bennett & Dorjee, 2016).

Most mindfulness research has examined its potential to regulate stress and improve cognitive, emotional, and interpersonal functioning (Sedlmeier et al., 2012), and the evidence-based relationship between mindfulness and creativity is a relatively recent, but growing, area of exploration (Kudesia, 2015). Creativity itself is a complex area of research and practice with many topical intersections. Yet, in popular education discourses, neoliberal perspectives have often emphasized instrumentalist views and societal drive toward innovation, more than a humanistic rationale for creativity (Mehta, Creely & Henriksen, 2020). In this column, we have ourselves pointed to the undeniable utility of creativity for societal innovation. But perhaps more importantly, creativity is a way of being in the world with value for human-centered wellbeing and expression (Goff & Torrance, 1991).

Both mindfulness and creativity are complex areas that have been *independently* touted in education practices. Yet, there is a theoretical reason and empirical evidence for presuming an important connection between them, which can and should be considered in education as well. These are both broad concepts with unique connections to emotions, attention, stress, wellness, and awareness of one's self and the world (Baas et al., 2014).

In a thematic review of the literature on the mindfulness-creativity research, Henriksen et al. (2020), summarized a diverse range of research that overwhelmingly points toward a relationship in which mindfulness/meditation practices enhance creativity. Some of the same mechanisms by which mindfulness improves overall emotional wellness are also factors that support creativity. For instance, research demonstrates that mindfulness improves a person's ability to concentrate (Sedlmeier et al., 2012), decreases the fear of being judged, and enhances open-minded thinking, while reducing aversive self-conscious thinking (Brown et al., 2007). These points map directly onto key characteristics of creative habits of working, thinking, and being in the world, including: relaxation or flow states (improved concentration), risk-taking (requiring a lack of fear about judgment), and curiosity or open-mindedness/openness to experience (reducing self-conscious experience) (Prabhu et al., 2008). Therefore,

these effects of mindfulness suggest that it supports many skills associated with creativity. Colzato et al. (2012) supported this contention with data to show that high levels of self-reported mindfulness correlate with creative practices.

Many aspects of 'trait mindfulness'—or skills that are facilitated by mindfulness training—increase creativity. For example, mindfulness is associated with the ability to change perspectives by expanding empathy and open-mindedness (Carson & Langer, 2006). It also increases a person's capacity to respond to situations in novel ways—which is central to creativity (Moore & Malinowski, 2009). The ways in which mindfulness can increase working memory, and reduce a person's fear of judgment, are especially beneficial to creativity (Chiesa et al., 2011). Experienced meditators tend to be better problem solvers with stronger scores on elements like verbal creativity (Greenberg, Reiner, & Meiran, 2012).

Lebuda et al.'s (2016) meta-analytical review hypothesized a positive relationship between mindfulness and creativity. They looked at peer-reviewed, quantitative studies with direct measures of mindfulness and creativity to measure the relationship. The study estimated the correlation between mindfulness and creativity at $r=0.22$ ($r=0.18$ without correction for attenuation). These findings suggest a significant positive correlation, with a small-to-medium effect size. They found no evidence of publication bias across all the studies, noting that the estimation of the relationship is accurate and robust. There were no differences between correlational and experimental studies—in both types of studies the effect size of the association was the same. This suggests not only a correlation between mindfulness and creativity, but more importantly reveals that developing mindfulness through meditation increases creativity—in other words, it goes beyond correlation to suggest causation.

That is not to say that the relationship between mindfulness and creativity is uncomplicated. As in any area of psychological research there are different moderators, such as the type of meditation practiced and the multifaceted character of mindfulness, that can contribute to significant challenges in empirically untangling the relationship (Baas et al., 2014). The inherent complexity and emergent or experiential nature of both mindfulness and creativity may also lead to somewhat confounding effects in research designs. Much like creativity, mindfulness involves different skills, like focused attention/observation, acting with awareness, non-judgmental description, and the ability to withhold judgment and refrain from instant evaluation—and these skills can be difficult to disassemble separately in studying the effects of interventions. Also, there is no commonly agreed-upon mechanistic model of creative processes that could confirm how different types of meditations might affect such processes. These caveats are all important to consider and keep in mind when stepping into a research exploration of

mindfulness and creativity. But, the general nature of the relationship, frequently confirmed as both positive and promising, is something to attend to, as it can fruitfully be applied in practical education settings, given the significant wellbeing needs that schools face.

The Creativity-Wellbeing Gap in Education

Educators and schools can look to this relationship, where mindfulness seems to strengthen creativity, as they address mounting calls to support students' creativity. The nature of the relationship may be promising for learning settings in which developing or supporting creativity is challenging. The potential social risk or embarrassment associated with a fear of trying something new that may fail or be deemed "odd" is often a barrier to creativity, particularly among young people. Anxiety, fear of risk or failure, and self-consciousness about one's own thinking can be detrimental in the social setting of classrooms. This opens up the possibility that mindfulness might offer practices that ameliorate barriers to learner's creativity. Perhaps more importantly, the potential of mindfulness in relation to creativity may be even more relevant as schools and educators seek to manage the socio-emotional needs of students in an often tense and distractible society.

While it is valid to consider the instrumental value of creativity for problem solving and innovation, some psychologists are also exploring how people use their creativity to find meaning in life (Richards, 2018). Creativity allows expression and reflection and offers alternate ways of thinking that can help us to make sense of difficult things. Psychologist James Kaufman has noted that the sense of continuity imbued by engaging in creativity makes it essential to being human (Keenan, Henriksen, & Mishra, 2018). Psychiatrist Marie Forgeard's (2013) work emphasizes the healing power of creativity in supporting mental health. Even smaller-scale acts of creative work or thinking, such as those of students in schools, may have invaluable benefits for health or wellbeing. When paired with mindfulness, the benefits might be multiplicative as learners and teachers become better at navigating their own thinking in psychologically healthy ways (Henriksen & Shack, 2020). This skill may be more pressing than ever as concerns about students' wellbeing increase. One large study (Merikangas et al., 2011) showed that approximately 22.2% of youth under 18 struggle with mental health issues. Anxiety and depression comprise about half of those numbers, more than ADHD or any other. Even for well-adjusted students, mindfulness can increase self-efficacy, help concentration, and improve mood, self-regulation, and engagement—and for young learners that have been systematically disadvantaged or who are vulnerable, the value of mindfulness becomes even more pressing.

An Example in Practice: Arizona's First Mindful School District

Despite popular interest in mindfulness, and a growing body of work on the subject in psychological literature, there is still a lack of educational literature on mindfulness occurring in practical classroom settings (Henriksen et al., 2020). A limited number of studies have considered mindfulness in applied settings like schools, mostly with positive results both for creativity or other wellbeing benefits (e.g., Justo et al., 2014; Franco, 2009; Yeh et al., 2019). But many extant findings on mindfulness are often limited to controlled research designs. Thus, more work, both practical and empirical, is needed on mindfulness in the real-world settings of classrooms and schools.

Here, we hope that a project that we (the two authors of this article) have been involved in, will contribute not only to the wellbeing of teachers and students in a local Arizona school district—but that data we are capturing may ultimately add to the body of mindfulness literature in schools. We are presently involved in research evaluation of an innovative and multi-year districtwide mindfulness training program within the Balsz School District in Phoenix, Arizona. The Balsz District in east Phoenix, Arizona, is embarking on a three-year initiative to become Arizona's first mindful school district, partnering with a local Arizona non-profit, Mindfulness First, addressing mindfulness in K12 schools—which we are presently engaged in studying as researchers.

Several years ago, the district worked with the Mindfulness First nonprofit at one elementary school in the district, to pilot a highly-successful "model mindfulness school" program—which the district is now beginning with all schools. From the time the program started through the course of the three-year mindfulness infusion program, the pilot school (Crockett Elementary) saw a reduction in annual suspensions—from an average of 45 yearly suspensions to 3. Further, the school rose in the AZEF school ratings (from a C rating, to recently attaining an A+ rating). Our formative interviews with teachers and the principal from the pilot-program elementary revealed how mindfulness culture had made the school a more enjoyable, comfortable, and safe place where young students felt more confident, calm, at ease, and empowered. The school culture moved to using wellness/self-regulation support for struggling children as opposed to punishment; parent feedback was also highly positive.

As a Title One school district, Balsz is the fifth most economically segregated school district in the country. The economic insecurity faced by many families there, along with children's exposure to domestic and community violence, can be destabilizing factors contributing to children

having difficulty coping with negative emotions, leading to emotional, behavioral, relational, and academic difficulties. With 18 languages spoken in the district, a homeless population that temporarily resides at the shelter in the district, a large population of individuals of refugee status (which is often fraught with trauma), and some households with three generations under one roof, the needs for support from the district to families and children are substantial. Yet, despite potential barriers to connection—in linguistic and cultural diversity, or many adults working multiple jobs to make ends meet—there is a strong sense of community among families, making it an ideal setting for systems-wide innovation. The success of the program in transforming one school encouraged the superintendent, teachers, families and school board to go district-wide (for a brief overview of the project see Evans, 2020).

Mindfulness practices have most clearly supported emotion regulation among students, and offered benefits to relationships and focus on schoolwork, which has been described by one Crockett Elementary teacher as “a miracle” at times, especially among students with the highest emotional needs. The benefits seem to occur from the inside out. That is, they first occur within the individual and subsequently extend outward in a multitude of collective ways, only to be further multiplied in a setting which supports mindfulness practice for all, leading to shifts in classroom dynamics and school performance. These ripple effects, expanding outwards, are one of the most interesting aspects of mindfulness being practiced and reinforced on every level of a school; these effects extend out into the classroom community and beyond.

Our research interviews with district parents have revealed that they believe they and other parents could benefit greatly from mindfulness practices if given the access to the training in a language and terms they understand. An additional layer of innovation applied to district-wide training of teachers, staff, administrators, and students is providing parents with mindfulness training (a research focus for the second author of this article). The goal is to “wrap around” each aspect of the children’s lives in order to promote wellbeing. This work has the potential to impact a high-needs, multigenerational, and diverse population that might not otherwise receive access to these teachings and provide all the necessary ingredients for potential system-wide social evolution.

Teacher interviews have so far shown that mindfulness practice has lowered their levels of stress and raised levels of individual wellbeing, with increased effectiveness in communication, ability to regulate emotions, detach from negative thinking and enhanced levels of compassion, for themselves and their students. Teachers who have been able to apply their mindfulness learning in their classrooms with students have witnessed immediate impact on test anxiety,

ability to tolerate frustration and persist through difficulty (essential to creative thought or open-ended work), and an increased sense of self-awareness and agency in students. Of course, none of these things are concrete evidence that students and teachers at Balsz are experiencing more creativity, even though there is a conceptual link, so this is ground for ongoing and future study.

For anyone interested in creativity, the potential is manifold. A reduction in anxiety opens up the potential for creativity—as stress has been shown to literally “narrow” our field of vision, closing off a person’s openness for the new (Williams et al., 1990). The biggest hindrances to creative thinking are often stressful thoughts, fear of failure, and negative internal narration that scaffolds much thinking (Tahirsylaj, 2012). The non-judgmental aspect of mindful awareness may account for how mindfulness can improve people’s beliefs about their own creativity (Capurso et al., 2014); and creative self-beliefs are the bedrock of creative capacity. Likewise, creative learning—such as open-ended, project-based, or arts-based learning—as opposed to high-stakes test-driven learning, is more likely to help students be involved more mindfully or deepen a learning experience. Thus, mindfulness offers mental preparation to lessen the kinds of fears of failure and discomfort with open-endedness that are barriers to creativity.

One of our upcoming research goals is not only to better understand the immediate and ripple effects of district-wide mindfulness practice, but to explore if and how it can be connected to creative opportunities for teachers and students. Based on the mechanisms of mindfulness and the established research, developing a mindful grounding in the school culture may already be supporting creativity, or at least the potential for and seeds of it. Building on this, we are planning events such as family mindfulness nights, and activities or workshops for teachers and students on creativity and mindfulness that allow applications of mindfulness, creativity, and play for the benefit of not only the learners, but also the collective community of the school.

Creativity, Mindfulness, and the Effect of Technology as a Tool

Given that this column looks at creativity in twenty-first century learning in the context of technology, one might wonder where technology fits in. We suggest that technology in relation to mindfulness or wellness has the same role that it does in most other settings—as a tool—one which can be problematic, or beneficial, or have any other range of effects on wellbeing, depending on how it is used and the context.

There are legitimate concerns about the overuse of technology and our societal reliance on it, particularly with respect to social media tools, smartphones, or other

ubiquitous computing elements which can create a sense of dependence and distraction—the opposite of mindfulness. Such concerns have revolved around growing mental health concerns, particularly for youth (Abi-Jaoude et al., 2020). O'Donnell (2015) suggests that mindfulness has gained widespread interest precisely because states of distraction, anxiety, suffering, and lack of connection are so common and detrimental. As society veers toward more chaotic, techno-centric, globally-connected and distracted modes, mindfulness offers an antidote to internalized unrest—particularly for learners who may face ever expanding sources stress and distraction. The effects of the pandemic and the sudden and disorienting shift to online learning have furthered concerns about isolation and feelings of distance via online settings. However, technology is not a monolith but diverse range of tools used for different purposes, and thus it is not inherently unmindful. There are examples and potential for technology in instances supporting mindfulness.

The first year of the district-wide mindfulness training in Balsz occurred in the year of the pandemic that the majority of schools around the world shifted to online learning. Even as Balsz School District, like many others, transitioned to remote learning, educators continued to support children in mindfulness practices aimed at soothing emotions, such as starting off the school day listening quietly to pleasant music. Additionally, all teachers in the district, regardless of prior mindfulness training, participated in virtual mindfulness training, both synchronously and asynchronously. Many teachers reported that they found the synchronous instructor-supported time to be beneficial to them in reinforcing their asynchronous learning; particularly, when mindfulness instructors helped to troubleshoot and assist teachers in adapting the practice in ways that were individually meaningful to them. Teachers have adapted this philosophy to teaching mindfulness to their own students and reported that they enjoy the creative adaptations to mindfulness practice in virtual settings. For example, one teacher who works with students with the diagnosis of ED (emotionally disturbed), indicated that many ED students cannot connect with their breathing. Instead, in online sessions she provides many options, including connecting with sensations in the body. These brief illustrations help to suggest that it is more than possible for mindfulness in education to be taught virtually and that some element of human connection, either to assist in adapting practices to meet student needs or facilitate, serves to amplify the practice.

Simple meditation practices may require only a few moments of class time (whether online or face-to-face), at the start of any class or at strategic points during the day. It simply requires guiding students through a few moments of heightened awareness and attention to a specific focus (e.g., their own breathing, a phrase, a feeling, an image, etc.). For teachers who are unsure about how to do this, technology

becomes a quickly accessible tool, as there are countless meditation apps, many that are free or offer free versions, offering easy support to scaffold brief meditation moments during class. Some commonly used and practical application meditation tools like Insight Timer, Headspace, Calm, or others, have a range of guided meditations for varied ages (even for kids under 5). Other mindfulness apps like GoNoodle or ClassDojo have mindfulness activities or tools explicitly designed for teachers in schools. For teachers who wish to integrate other practices for mindfulness, there are more available resources online for tools, mindful games, activities, etc., than we could ever cover here.

The benefit of apps or similar tools is that they can help to overcome the distraction or compliance problem (e.g., trying to meditate only to find that the entire time has passed in a fog of distraction). As the mind drifts to thoughts or worries, there is a vocal reminder to gently bring the attention back to the breath or the object of focus. The more that learners' practice, the more they strengthen their awareness of what their thoughts and attention are doing, which can help them to de-identify with anxieties and potentially generate more expressions of creativity. The relationship of technology to mindfulness and wellbeing is not a straight line, but rather a complex one that varies based on the nature or types of tools being used, and how they are used.

Conclusion

Although the already well documented benefits of mindfulness are important, we aim to explore how the transformation to one's personal emotional, mental, and physical health, whether that be for students or teachers themselves, influences the "greater good" in development of a culture of compassion and creativity that is prosocial and operates in classrooms, individual schools, district offices, and extends outward into the community. When used thoughtfully (mindfully) technology and digital connectivity offer one potential route for connecting and reaching people, as well as access to the support of a range of tools, techniques, and practices. While mindfulness practice cannot provide any easy "fix" for the systemic inequities or difficulties that society and education face—situations like the pandemic underscore the value of attending to our sense of wellness and humanity, via topics such as mindfulness and creativity.

A famous quote from Abraham Lincoln states, "*Give me six hours to chop down a tree and I will spend the first four sharpening the axe.*" Mindfulness might be seen as a form of preparation of the mind for coping, learning, creating, and being in the world. It is not separate from learning, but rather can be a tool to sharpen the mental axe before attempting to chop down the metaphorical tree. It is valuable for emotional and mental health in its own right, and it also

supports creativity, individually and collectively—offering ripe ground for investigation and innovation.

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Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.