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Mindfully Teaching in the Classroom: a Literature Review

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Abstract: The practice of mindfulness is being used with increased frequency in schools around the world. In the current literature review we outline some of the core concepts and practices associated with mindfulness and discuss studies analysing the process of mindfulness teacher training. Preliminary research in this emerging field suggests that mindfulness has the potential to improve classroom management, teacher-student relationships and instructional strategies. Mindfulness instructors recommend that before teachers can feel comfortable and effectively teach mindfulness in the classroom they need to embody and practice mindfulness in their own lives. It is proposed that in order to improve our knowledge base in this area a critical synthesis and analysis of school-based mindfulness programs is required.

Introduction

The nature of the school system is changing throughout the world. The view that education is a tool to produce a stable and well-prepared workforce in a competitive global environment is being eclipsed by the movement in thought where a child is recognised as an intelligent and competent individual, capable of active engagement within the world (Tregenza, 2008). Mainstream schools around the world are now actively implementing programs that recognise the importance of nurturing a child's social, emotional, mental, spiritual and cognitive well-being (Garrison Institute Report, 2005; Tregenza, 2008; Yager, 2009).

A catalyst stimulating the proliferation of wellness promoting programs is stress in the school system. In countries such as Australia, depression is the most common mental health problem experienced by youth aged 12-25 years. One in 10 young Australians will experience an anxiety disorder in any given 12 month period (Orygen Youth Health, 2012). If left untreated, depression and anxiety become risk factors for alcohol and drug problems as well as suicidal thoughts and actions (McGorry, Purcell, Hickie, & Jorm, 2007). By 2020, it is estimated that globally 1.5 million people will die each year by suicide and between 15 and 30 million will make the attempt (Bertolote & Flieschmann, 2002, as cited in Collins et al., 2011). Australian schools, in various demographic areas, are actively seeking government funding to implement wellness programs in order to minimise the incidence of self-harm, anxiety issues, depression and lack of student engagement (K. Miller, personal communication, May 15, 2011).

Stress is not only impacting Australia's children but also being felt by teachers worldwide. Teaching in the school system has become increasingly unattractive with retention and attrition a global concern (McCallum & Price, 2010). Some of the reasons given for dissatisfaction and increased stress levels within the profession include: an increased

focus on standards; heavy workload; increased student demands (McCallum & Price, 2010); perception of teaching against children's best interests and no control over direction and purpose of work (Gold et al., 2010).

Mindfulness is a strategy that is being used with increased frequency and receiving mainstream acceptance around the world as a means to enhance both students' and teachers' wellbeing (Black, Milam, & Sussman, 2009; Greenberg & Harris, 2012; Mendelson et al., 2010).

The concept of mindfulness attracts an array of interpretations and definitions but may be simply described as a natural human capacity, which involves observing, participating and accepting each of life's moments from a state of equilibrium or loving kindness. It can be practiced through meditation and contemplation but may also be cultivated through paying attention to one's every day activities, such as, eating, gardening, walking, listening and school based activities such as class work.

A United States based organisation dedicated to applying the power of contemplation to the fields of education, contemplative care and ecology, commissioned a report to determine the status of contemplative techniques with main stream student populations in K-12 education settings (Garrison Institute Report, 2005). The researchers found that a wide range of individuals with various qualifications are teaching mindfulness in schools. For example, mindfulness instructors consist of Buddhist mindfulness experts with no teacher training, volunteers with a wide array of meditation experiences and teachers who integrate mindfulness into the classroom based on their own personal practice. Mindfulness is also being implemented as whole school programs within a wellness framework and in some settings the practice is being imparted to teachers with little or no meditation experience or understanding of mindfulness (Garrison Institute Report, 2005).

In the current literature review we focus on examining how teachers are being trained in the practice of cultivating a more mindful way of being in the classroom and what impact the practice has on a teacher's daily life. The articles we review focus on the experience of classroom teachers participating in mindfulness training in order to either effectively cope with their daily teaching routines or impart the practice to students. Research in this area is in its infancy and the majority of studies to date have been directed towards understanding the impact mindfulness has on student well-being. Generally, there is considered to be no guiding theoretical framework for analysing mindfulness interventions, with research and discussion conducted in a fragmented fashion over a number of disciplines (Ospina et al., 2007). First we turn to briefly differentiating the two different research traditions associated with mindfulness in education.

Mindfulness Research Traditions in Education

There is posited to be two different traditions associated with mindfulness which has created an element of confusion associated with the discussion of mindfulness in education (Compton & Hoffman, 2012). There are traditional mindfulness practices, which we explore in this article, connected to and influenced by Buddhist meditative disciplines and other spiritual traditions including Hinduism, Islam, Taoism and Judaism (Stahl & Goldstein, 2010). And there is another perspective developed by Ellen Langer (1989) in the field of psychology (Levinthal & Rerup, 2006), which adopts a more secular and behavioural approach. Both constructs have intersecting elements and implications and some authors clearly distinguish between the two constructs (see Compton & Hoffman, 2012), while others discuss the concepts as if they are one and the same (see Reid & Miller, 2009).

Langer's approach involves paying attention to external stimuli; noticing what is happening in the environment and responding in a mindful rather than mindless or passive way. This form of mindful attention has the potential to help individuals create new

categories of experience and to be open to new information and different points of view (Compton & Hoffman, 2012). In contrast, mindfulness influenced by Buddhist traditions is associated with observing moment to moment internal and external stimuli without categorisation or judgement, remaining unattached to outcomes, developing a basic trust in your experience, feeling at peace and in contrast to Langer's approach, does not require the individual to alter behaviour (Compton & Hoffman, 2012). However, a mindfulness practice will often lead to behaviour change.

Capturing Mindfulness in Words

In the Western world the majority of adults have little to no understanding of the term "mindfulness" (Van Dam, Earleywine, & Danoff-Burg, 2009) and capturing and defining mindfulness in words is complex as it requires similar considerations to defining human consciousness. Grossman (2008) contends there is only vague agreement and comprehension in the research literature and beyond as to what mindfulness entails. Definitions of mindfulness are often subject to the author's own understanding of the concept and introspective experience. As such, conceptualisations vary from author to author (Grossman, 2008; Ospina et al., 2007).

Mindfulness is mostly used to refer to a way of "being" which has prescribed characteristics, activities and programs designed to cultivate this state as well as ancient meditation techniques rooted in various religions. Hirst (2003) suggests that mindfulness is a discourse-dependent concept that can be articulated from a number of different positions. Clearly articulating and sifting through the various interpretations of this construct is a difficult feat (Kostanski & Hassed, 2008).

In an attempt to more clearly elucidate the term, we outline the purpose of mindfulness, a theoretical model of the concept and an experiential account of mindfulness from a teacher's perspective. This approach aims to offer the opportunity for the reader to experience a taste of mindfulness and to develop his or her own understanding of the concept.

The Purpose of Mindfulness

One of the first thing systems analysts recommend when trying to unravel or come to grips with a term is to look at its purpose (Meadows, 2008). The purpose of mindfulness is to help the individual perceive reality more clearly; enabling students to understand themselves and others better and enjoy a more fulfilling and joyful life (Weiss, 2004, as cited in Gause & Coholic, 2010).

Buddhist teachings suggest that in order to move beyond embedded habits of the mind and to become free of some of the distortions and confusions to which we are subject, we need to train ourselves to attend very carefully and deliberately to the process by which we construct past and future experience in the present moment (Hamilton, 2000, as cited in Gause & Coholic, 2010). Mindfulness meditation was thus offered as a form of phenomenological practice aimed at helping the student examine the stream of experiential phenomena with an attitude of acceptance and clarity that would reveal the knowledge that we are all One and connected (Dalai Lama, 2005, as cited in Gause & Coholic, 2010). As one of Nicole Albrecht's students wrote in her journal as part of the undergraduate online course, "Introduction to MindBody Wellness" at RMIT University, Melbourne, Australia, "Being mindful really is all about understanding the beauty of the world, in all its diverse complexities" (E.M. Wilkie, personal communication, September 26, 2012).

This ancient intention of mindfulness appears to be reflected within the practices of school-based mindfulness programs. Researchers from the Garrison Institute Report (2005)

found that creators of the programs and mindfulness teachers aim, in the long term, to nurture qualities such as compassion, empathy and forgiveness in student populations (Garrison Institute Report, 2005). Short term goals include: enhancing student engagement and academic performance; improving the school's social climate and promoting a wide range of wellness outcomes, such as positive body image through to ecological awareness (Garrison Institute Report, 2005). The programs are argued to share a common set of outcomes consistent with those of mainstream education (Garrison Institute Report, 2005).

Core Mindfulness Concepts

In recent years, psychologists have turned their attention to defining and providing a theoretical model for mindfulness in order to create a common framework for further enquiry. Shapiro, Carlson, Astin & Freedman (2006) propose three core axioms involved in a mindfulness practice: Intention, Attention and Attitude. The axioms are not sequential, but rather are engaged simultaneously in the process of mindfulness. Kabat-Zinn's (1994, p. 4) often cited definition of mindfulness – "paying attention in a particular way: on purpose, in the present moment and non-judgmentally," embodies these three axioms (Shapiro et al., 2006).

Intention or an individual's vision is seen as an integral first step in a mindfulness practice. Research shows that the intention of the practice is instrumental in determining the outcomes or benefits received which can be highly individualised (Shapiro, et al., 2006). For example, if a person is adopting mindfulness to reduce high blood pressure – this will usually be the outcome (Shapiro et al., 2006).

The second axiom, Attention, refers to paying attention in the moment to your internal and external experience. It involves suspending judgement and observing the changing field of thoughts, feelings and sensations as they occur in the mind-body. Attention needs to be regulated and sustained. An individual while engaging in mindfulness practices will not be worrying about the future or living in the past but concentrated on the present. Some of the questions posed in scales measuring the "attentional" aspect of mindfulness indicate characteristics that identify when you are not attending to the present moment or "paying attention". For example: you may find it difficult to stay focussed on what is happening in the present; walk quickly to where you are going without paying conscious attention of your surroundings; do not notice feelings of physical tension or discomfort until it really grabs your attention; rush through activities without really being attentive to them; do jobs or tasks automatically without really being aware of what you are doing; or listen to someone while doing or thinking about something else at the same time (Brown & Ryan, 2003).

Attitude, the third axiom, involves the qualities a person brings to their attention. Mindfulness is often associated with bare awareness. However, Shapiro et al. (2006) feel that the description of "bare awareness" does not adequately reveal what qualities individuals bring to a mindfulness practice. They feel it could mean an individual observes their life with a cold and distant attitude or they pay attention from a state of innate stability, where compassion, open-heartedness and peace for others and self reside. The researchers believe the qualities one brings to the practice of mindfulness are crucial. They posit that individuals can attend to their own internal and external experiences without evaluation or interpretation whilst also being in a mindset of loving kindness – even if what is occurring is contrary to deeply held wishes or expectations. This state of being compassionate and loving to oneself and others in the face of unexpected and unwelcome life events is also asserted in the practice of Yoga, as operating from a natural state of equilibrium and stability (R. Miller, 2005), which we suggest is perhaps "bare or natural awareness".

Mindfulness in Practice

Mindfulness is often considered by meditation instructors to be an innate and inherent human quality (Adyashanti, 2006; Harrison, 1998; Kabat-Zinn, 1994), one that we are often trained out of through fast paced and outcome driven lives. Therefore, as an innate human condition, mindfulness may be practiced in many aspects of life without formal training and teachers may naturally incorporate mindfulness into classroom practice. New York primary school teacher, Karen Ager notes that before formally practicing mindfulness she already intuitively incorporated many of the mindfulness practices outlined in Whitehead's (2011) position paper, "Mindfulness in early education"(personal communication, April 15, 2012). However, formally cultivating mindfulness in a graduate Positive Psychology course enabled Karen to deepen her understanding and practice of this trait. Table 1 outlines an assessment task, which the reader, if unfamiliar with the concept, may like to try in his or her own daily life. As Grossman (2008) asserts we can only at best gain a distant understanding of mindfulness through reading on the topic. In order to start to comprehend the concept we need to cultivate this way of being in our daily lives.

RMIT University, Master of Wellness program, Mindfulness Discussion Assessment

After reading course materials on mindfulness incorporate mindfulness into your weekly life through:

- a. **Mindful Eating:** Practice eating mindfully up to 5 x this week. At least for as long as you can ... but try to reach 5 minutes.
- b. **Mindful Focus:** Apply mindfulness to something else that you already do, and that might be easy for you (e.g., during runs, yoga, cooking, playing?).
- c. **Mindful Challenge:** Apply mindfulness for five minutes per day during another typically mindless or challenging activity (e.g., on public transport, in the shops, watching TV,), and especially whenever you catch yourself going into judgement mode? Or multi-tasking?

Reflecting and Sharing: Reflect on these experiences and share highlights and challenges with your group. That is, include both what you found challenging (including lack of practice which is highly relevant and common), as well as awareness of any uplifting or flow-on effects (i.e., impact on rest of your day and well-being).

(L. Ievleva, personal communication, March 26, 2012)

Table 1: Mindfulness discussion assessment task

In completing the above assessment task, primary teacher, Karen, applied mindfulness to her daily teaching routines and found that by cultivating a more mindful way of being she was able to gain a new awareness of her teaching habits and noticed a particularly effective teaching strategy that she regularly used with students. Karen (personal communication, April 15, 2012) shares:

During the week I suggested to a 10 year old that she trust her feelings about spelling. I asked her to tick words that she "felt" were spelled correctly and to underline words that were perhaps "not quite right". We did this during a number of sessions. It turns out that whenever she trusted her intuition she was perfectly correct. As Kabat-Zinn suggested it is better to trust your intuition, even if you make some "mistakes" along the way. This may not be the usual interpretation of trust, but this awareness was enlightening. I've done this with other students, but I've never really been mindful of the activity. Follow up? I am hoping that this will become a work habit for my students in general and that they will trust themselves in all aspects of their lives.

Before formally practising mindfulness, Karen wasn't fully aware that she routinely encouraged students to use their intuition and thus developed the capacity to view her teaching habits through a new lens. Shapiro et al. (2006) describe this awareness as a "rotation in consciousness" and suggest that it is a meta-mechanism that is basic to human development and enhanced through mindfulness practices. Other mindfulness instructors note that class participants commonly develop this capacity – moving from a position where one is completely identified with one's experience to a position in which the experience becomes available for observation (McCown, Reibel, & Micozzi, 2011). However, they feel it is important to note that "(1) re-perceiving does not create distance and disconnection from one's experience but rather enables one to look, feel and know more deeply; (2) importantly, the "observing self" is not reified, but rather is seen as a temporary platform for observation and questioning" (McCown, et al., 2011, p.66).

Mindfulness in Schools – Psychology's Influence

Over the last 25 years, mindfulness, largely influenced by the teachings of Eastern religious traditions, has been incorporated into psychological theory and practice (Bishop et al., 2004; Brown & Ryan, 2003; Shapiro et al., 2006) and cultivating mindfulness has become an integral element in a number of multifaceted therapies (Skinner et al., 2008), categorised as "third wave behaviour therapies" (Greco & Hayes, 2008). The therapies include: Mindfulness Based Stress Reduction (MBSR); Mindfulness Based Cognitive Therapy (MBCT); Dialectical Behaviour Therapy (DBT); Mindfulness Based Eating Awareness Training (MB-EAT) and Acceptance and Commitment Therapy (ACT). Following the clinical success of third wave therapies around the world, it has been a natural progression for school-based psychologists to incorporate and adapt mindfulness for specialist treatment with children (see Semple, Lee, Rosa, & Miller, 2010).

Mindfulness meditation is now also considered to be an integral element in Positive Psychology programs. Positive Psychology gained prominence when in 1998, Martin E.P. Seligman, then-president of the American Psychological Association, encouraged his colleagues to remember psychology's forgotten mission – to build human strength and to nurture genius (Compton & Hoffman, 2012). Since this time a number of Positive Psychology Interventions (PPI) have flourished and now form part of school, university and workplace programs. A typical program focuses on experiencing and reflecting on gratitude, acts of kindness, flow, mindfulness activities, hope, optimism, signature strengths and savouring experiences. Universities such as Victoria University in Australia teach well-being in schools through the framework of Positive Psychology to pre-service education students studying the subject, Student Welfare (B. Van Halen, personal communication, April 12, 2012). During their placements in high schools, students have, in some cases, gone on to establish Positive Psychology programs that incorporate mindfulness.

The field of psychology's attention to mindfulness and the growing research base has been influential in precipitating the recent establishment of mindfulness programs in mainstream classrooms. However, it is important to note that for centuries many individual teachers around the world actively incorporated techniques from their own personal meditation practice to elicit and encourage a mindful way of being (Fisher, 2006). Now that Western psychology research and practice has lent validity to mindfulness as a valuable tool to foster wellness, practices that were once considered fringe or marginal by mainstream educators only a decade ago, are now being embraced and openly recognised as integral elements in running a successful classroom.

Mindfulness Training and Teacher Development

Globally, there are a growing number of school-based mindfulness programs that involve varying degrees of teacher training (Black et al., 2009). For example, in Bhutan, mindfulness is currently being implemented across the country's education sector (Bhutan Ministry of Education, 2012) in an effort to improve Gross National Happiness (GNH); the government's preferred goal and measurement tool over the uni-dimensional economic indicator of Gross Domestic Product (GDP) (J. P. Miller, 2010). Buddhist monks work together with the education department and a university in an effort to cultivate: deep critical and creative thinking; understanding of the country's ancient wisdom and culture; contemplative learning; civic engagement as well as a holistic understanding of the world (J. P. Miller, 2010). The Bhutan Ministry of Education report that the results of this initiative have been very encouraging and several schools have noted visible and substantial improvements in student mindfulness and regard for cultural heritage (Bhutan Ministry of Education, 2012).

In Western countries, a number of programs that incorporate mindfulness have been developed to specifically harness teacher resilience, compassion and "habits of mind" (Roeser, Skinner, Beers, & Jennings, 2012). Habits of mind refers to: gathering data through all of the senses, being aware of and reflecting on experience in a nonjudgmental manner; being flexible when problem solving, regulating emotion and being resilient after setbacks as well as attending to others with empathy and compassion (Roeser et al., 2012, p.167). It is posited that mindfulness training offers a new generation of professional teacher development (Roeser et al., 2012).

Literature Review

In an effort to review the current state of research related to mindfulness teacher training, literature searches restricted to the English language, with no time restrictions, were conducted during September 2010, August 2011 and April 2012. The following databases were searched: CINHALL (EBSCO), Expanded Academic ASAP (Gale), Google Scholar, Health Collection (Informit), Humanities & Social Science Journals, ProQuest Education Journals, ProQuest Psychology Journals, ProQuest Social Science Journals, ProQuest Research Library, PsycINFO (ProQuest), PubMed and SAGE Journals Online. Search terms used were: Mindfulness AND Schools; Meditation AND Schools; Mindfulness AND Education; Meditation AND Education; Mindfulness AND Teachers; Meditation AND Teachers; Mindfulness AND Teacher Training; and Meditation AND Teacher Training. All fields were searched. Approximately 5 articles were located in regards to teachers and mindfulness in schools or university settings. They included reviews, opinion pieces and two studies investigating mindfulness teacher training.

Due to the lack of articles located, manual searches were also conducted in individual journals – primarily in the areas of education and psychology. In addition, general Google searches were performed to locate organisations conducting mindfulness teacher training and examine sites for relevant references or links to research. Only studies investigating and reporting on the impact of mindfulness teacher training in K-12 education settings were included for review.

Study 1

The first research study we examine evaluates how the Mindfulness Based Stress Reduction (MBSR) program impacted stress levels, trait mindfulness and the goals of 9 self-selected primary school teachers and 2 teaching assistants (Gold et al., 2010). The program's distinctive features include: weekly group sessions; regular home practice; body scan, sitting, movement and walking meditation; as well as informal practices that bring mindful awareness into daily activities (Burke, 2010).

Prior to undertaking the program, teachers were asked to identify their main problems and rate them on a severity scale from 0 to 8 as well as identify the goals they wanted to achieve during the program. Teachers also completed the Depression Anxiety Stress Scales (DASS) (see Henry & Crawford, 2003) and the Kentucky Inventory of Mindfulness Skills (KIMS) (see Baer, Smith, & Allen, 2004) before and after the program.

Results indicated that before the intervention most teachers were suffering from significant emotional distress and depression with teachers reporting: a lack of self-confidence and self-efficacy; having too many things to do and not enough time to do them in; feeling pressured to teach in a way that went against children's best interests; having difficulty planning and problem solving and lacking time to relax. Teachers' goals included: effectively managing time; ability to say "no" without feeling guilty; improve self-esteem; improve problem solving skills and reduce stress and worry in concern to managing daily activities.

After completing the MBSR training, teachers felt they were about 60% along the way to achieving their goals and most recorded improved DAAS scores. One teacher scored as more distressed due, in part, to personal and not work-related reasons and only four participants scored within the clinically significant range on any subscale and two of those only as mildly stressed. Participants' KIMS scores showed marked increases in all four factors of mindfulness with the improvement on the "Acceptance without judgment" scale being statistically significant. While these results are promising the researchers noted that further larger scale trials need to be conducted with a control group in order to increase external validity.

Study 2

Janet Etty-Leal (personal communication, March 15, 2012) says that in designing her mindfulness programs, which are now taught widely around Australia, she hopes not just to manage stress but to increase student and teacher well-being. Etty-Leal's Meditation Capsules program was the culmination of her own personal experience and practice of mind-body wellness modalities, such as Tai Chi, Yoga and meditation, combined with several years establishing mindfulness programs in government and non-government schools.

The Meditation Capsules program is presented in a text book together with an accompanying CD in a familiar lesson-style format that teachers can readily grasp and put into action (Etty-Leal, 2010). It is divided into 10 sessions and sequentially builds awareness of how to implement mindfulness in the classroom. Techniques covered include walking

meditation to deepening and discovering a child's connection with quiet inner peace. Meditation Capsules is designed to suit a range of ages from four to eighteen years of age. The program and book caters for teachers that have no experience with meditation or practicing mindfulness techniques but also is designed to suit individuals with an extensive mind-body wellness background. In addition, the program integrates mindfulness techniques with core curriculum subjects to enhance academic performance, compassion and general well-being.

Mindfulness teacher training programs are adjusted at times to suit different contexts and teachers (McCown et al., 2011). ETTY-Leal likewise, favours a descriptive approach over a prescriptive approach when training teachers to teach mindfulness (Joyce, ETTY-Leal, Zazryn, Hamilton, & Hassed, 2010). ETTY-Leal encourages teachers to listen to their own intuition and wisdom when cultivating mindfulness in the classroom. The teacher is considered to be one of the best proponents of the practice and by personalising the program and making it relatable, it is thought that students will feel motivated and inspired to actively participate and incorporate mindfulness in their daily lives (Joyce et al., 2010). ETTY-Leal teaches mindfulness to both students and teachers with limited mindfulness understanding and does not believe that a lack of background in this area should exclude teachers from learning and developing the practice together with their students (personal communication, September 25, 2012). This we feel offers a humbling and empowering growth opportunity for both adults and children as students cultivate mindfulness together with their teachers.

Meditation Capsules was recently assessed in two primary schools in Australia, with one of the aims being to monitor how teachers integrate the technique into the Year 5 & 6 classroom (Joyce et al., 2010). In total, 9 classroom teachers participated in learning to teach mindfulness in the classroom. The average length of teaching service was 11 years, one teacher was male and one teacher had previously taught meditation in the classroom. However, it was not reported if any of the other teachers personally practiced any mind-body wellness techniques, such as mindfulness, guided imagery or meditation. It also was not clear how long teachers were trained in the practice before they began teaching students.

In post-intervention interviews teachers commented that they were generally positive about integrating mindfulness in the classroom. They reported enjoying teaching the practice together with other colleagues and also valued the support provided by the wider school community. The teachers remarked that being able to apply mindfulness to their personal lives helped with the program's successful implementation and they suggested that more training in the practice would have been beneficial. The children generally responded with enthusiasm to learning mindfulness but many teachers felt inadequately equipped to deal with students who didn't take the lessons seriously (Joyce et al., 2010).

Interestingly, a narrative account of a teacher who was also a long-term meditation practitioner details how a mindfulness practice helps to "reduce the unpleasantness of interacting with hostile students" (Kernochnan, McCormick, & White, 2007, p. 66). When faced with a hostile student this teacher learnt how to watch emotions such as anger, fear, or irritation as they arise, view them with equanimity (Kernochnan et al., 2007) and to respond with openness rather than defensiveness. This enabled the teacher to appreciate the student's comments and use them as a springboard to engineer lively whole class discussions.

Mindfulness instructors suggest that when a class is faced with a distraction that threatens to confound class harmony, such as students trying to disrupt class proceedings, the teacher can use a number of mindfulness techniques to restore classroom equilibrium (McCown et al., 2011). Mindfulness tools can be integrated into any classroom environment as a means of settling children moving from one lesson to another. The breath is one such tool. Reminding students to return to their breath and connect with their body's movement through the breath immediately relaxes the body via the parasympathetic nervous system (McCown et al., 2011), stilling the mind and helping the class achieve a peaceful state.

Whitehead (2011) suggests that before cultivating mindfulness in the classroom, teachers, first need to work on their own personal practice and transform the way they communicate and connect with others. Teachers need to embody the core characteristics of mindfulness (Crane, Kuyken, Hastings, Rothwell, & Williams, 2010). The practice enables the individual to have greater awareness of one's emotions and actions (Whitehead, 2011) and this presence brings a new dimension to student-centered teaching (Kernochnan et al., 2007). It allows the teacher to pick up on non-verbal expressions and subtle changes in the tone of voice of students and thus allows a deeper level of connection and enhanced engagement in the learning process (Kernochnan et al., 2007).

Wellness writers, Travis and Callender who developed one of the world's first wellness inventories suggest that connection is the key to enhancing well-being (J. Travis, personal communication, February 28, 2010) and it would appear that mindfulness is one key that readily enables connection and a student-centred classroom. Studies examining classrooms that use mindfulness as a core ingredient in the student's learning experience found that they are able to transfer material learned to new and novel situations, are more creative and able to think independently (Richart & Perkins, 2000; Thornton & McEntee, 1993; Wong, 1994; all as cited in Napoli, Krech, & Holley, 2005).

Study 3

Other classroom management and teaching benefits have also been described in interviews by three school teachers undertaking mindfulness training (Napoli et al., 2005). The study focused specifically on how learning mindfulness impacted elementary teachers' teaching behaviour, student-teacher relationships and teachers' personal lives.

Teachers concentrated on learning mindful breathing, body awareness, meditation, movement and sensory experience over an 8 week period. Classes met each week for 2½ hours with one 8-hour day of silence. In addition, over a 9 month period, teachers received bi-monthly 45 minute mindfulness lessons with their students.

The study participants found that the mindfulness training helped them teach in a less fragmented fashion and add greater depth of knowledge to the learning experience. The teachers additionally found they were able to readily identify key conceptual competencies they needed to communicate to children in subject areas such as science, by concentrating on the process rather than the outcome. They, in general, felt less overwhelmed by the curriculum and the learning outcomes they needed to get through.

Teachers remarked at how readily students had taken to mindfulness instruction and that they started to naturally integrate mindfulness into the classroom to centre attention, engage student learning and think about nutrition and exercise. For example, teachers asked their students to think about how they eat and the nutritional content of the food. When dealing with stressful situations with children in the playground teachers used mindful breathing techniques as a behaviour management tool, to reduce both their own and student anxiety. Students were further reminded to practice mindfulness during regular intervals throughout the day, with children self-initiating body-scan activities. Mindfulness was also embodied by the teachers in their personal lives and even helped one teacher with childbirth.

Teachers suggested that the implementation of mindfulness programs could be improved in a number of ways: teach the whole school populous in order to create a better school environment; incorporate mindfulness within health education so as not to infringe on other classroom time; have a consistent and regular mindfulness training program that is merited; increase evaluation of the program through meetings; adapt the practice to best suit students' learning needs and involve parents in the program (Napoli et al., 2005).

Conclusion and Research Implications

Wellness is taking a preeminent role in today's education system. With this mainstream movement to create schools that cultivate holistic education a number of interventions used in the health care sector are being adapted to foster well-being in school communities. One such practice is mindfulness, an ancient art and a now well researched intervention used in health care settings around the world. In the current article we have concentrated on reviewing literature analysing mindfulness teacher training. Three pilot studies were examined and it was revealed that wide ranging wellness benefits are derived from a mindfulness practice.

Mindfulness practices have been shown to help teachers: reduce their stress levels; assist with behaviour management strategies and improve self-esteem. Some teachers also found they were able to gain a holistic view of the curriculum and thus impart key concepts to children – rather than feeling overwhelmed by the large number of learning outcomes they were expected to teach. The example of New York teacher Karen Ager, revealed how cultivating mindfulness enabled her to develop heightened awareness of her teaching habits or “habits of mind” and allowed her to empower students to trust their own intuition when approaching academic work, a skill she now hopes to nurture and encourage in all her students.

Mindfulness instructors and research suggest that before teachers can feel comfortable and effectively teach mindfulness in the classroom they need to embody and practice mindfulness in their own lives. However, this does not preclude teachers and students learning together. It was also speculated that it may be more fruitful to adopt a whole school approach to mindfulness rather than just have certain year levels and teachers learn the practice.

Research into school-based mindfulness programs is in the infancy stage. A topic that was once considered a fringe activity is now experiencing mainstream acceptance. With the proliferation of mindfulness programs around the world researchers are now beginning to understand how this movement in thought is influencing classroom activities. We posit that mindfulness has the potential to positively influence and shape behaviour management strategies, teacher professional development as well as learning strategies.

One of the first steps needed to understand this field will be a thorough analysis and synthesis of the plethora of mindfulness programs that are currently being implemented. A theoretical framework, purpose built for educational settings, is also required in order to make sense of literature from a wide range of disciplines and methodological perspectives. It is posited that the complex and systems-based construct of wellness, which takes into account developmental stages over the life-span may be a suitable framework to analyse the process and benefits of bringing mindfulness to the classroom.

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