

2014

Mindfulness and the Beginning Teacher

Ross S. Bernay
AUT University

Follow this and additional works at: <https://ro.ecu.edu.au/ajte>



Part of the [Higher Education Commons](#), and the [Teacher Education and Professional Development Commons](#)

Recommended Citation

Bernay, R. S. (2014). Mindfulness and the Beginning Teacher. *Australian Journal of Teacher Education*, 39(7).

<http://dx.doi.org/10.14221/ajte.2014v39n7.6>

This Journal Article is posted at Research Online.
<https://ro.ecu.edu.au/ajte/vol39/iss7/4>

Mindfulness and the Beginning Teacher

Ross Bernay
AUT University
New Zealand

Abstract: This article reviews a hermeneutic phenomenological study of five beginning teachers who were introduced to mindfulness during their initial teacher education programme. The participants kept fortnightly journals and engaged in three interviews with the researcher to assess the benefits of using mindfulness during the first year of teaching. The participants in this study discovered through their lived experiences of using mindfulness in their first year of teaching that their personal wellbeing was enhanced, stress was reduced, and they could focus greater attention on their lesson planning and their students. They responded rather than reacted emotionally to student needs. The results of this study suggest that introducing mindfulness in teacher education could enhance the wellbeing of student teachers and beginning teachers and enhance job retention.

Introduction

Being a teacher is a very stressful occupation. A number of studies have indicated that many teachers leave the profession within the first five years. In New Zealand, Elvidge (2002) reported that 37% of teachers resigned by the end of the third year of teaching; Cameron, Baker and Lovett (2006) re-confirmed this alarming statistic and added that only 25% of those teachers return to the classroom. Although these statistics vary around the world, the statistics cited in New Zealand are matched in one survey in the United States, with 40% leaving within the first five years (Viola, 2009). Many countries including New Zealand provide induction and mentoring programmes for teachers to improve teaching quality and retention.

Very few teacher induction or mentoring programmes address the need for personal and professional support to promote wellbeing and cope with the demands of the profession. When coping strategies are included to manage these stressors, greater retention is achieved (Gless & Moir, 2004). Mindfulness, being present moment focused without judgement (Kabat-Zinn, 2003; 2005; May, 2006), and exercises to build a teacher's mindfulness, may provide a new way of perceiving their experiences and to meet the expectations of the classroom.

This article is a summary of the hermeneutic phenomenological study of five first year teachers' lived experiences using mindfulness completed for my doctorate in education.

The aim of the study was to review the effects of mindfulness on the professional lives of a group of beginning teachers. Based on perceived reductions in stress, an improved sense of wellbeing, and increased ability to cope with the needs of individual students, the results of the study indicated that mindfulness could be a significant part of the initial teacher education and professional development programmes for the participants.

Literature Review

Defining mindfulness

Mindfulness traces its roots back to Buddhism but can also be found in most religions of the world and indigenous traditions. In *Pali*, the language of Theravada Buddhism, mindfulness is *sati*, an active state of mind in which individuals focus their attention on a subject and direct that attention through thinking and reflection to a deeper consciousness (Gethin, 2011). Through engaging in mindfulness, an individual is able to focus concentration and gain insights for living and decision making. Mindfulness can be interpreted as a meditative exercise as well as a way of being in the world. Sharples (2003) evidenced mindfulness in Judaism, Hinduism and Christianity through contemplative practice and prayer. Many indigenous traditions include mindfulness practice. In a New Zealand study, the nature of contemplation and mindfulness was evident through the principles of *Ata*, a Māori philosophy that guides personal practice highlighting the importance of quality space and time through reflection, an integral part of mindfulness practice (Pohatu, 2000).

In a western context, Kabat-Zinn (2003) is considered to be a key proponent of mindfulness. His research at the Mindfulness Based Stress Reduction Clinic focused on the benefits of mindfulness meditation as *present-moment, focused, awareness without judgement*. Langer (1997), in contrast, discussed the importance of mindfulness in everyday life without a meditative component and noted benefits in improved frame of mind and increased ability to find new and creative solutions. She has defined mindfulness as: “continuous creation of new categories; openness to new information, and implicit awareness of more than one perspective (Langer, 1997, p. 4).

The research in this study draws upon the wisdom from the world’s religious traditions, researchers, and indigenous populations to define mindfulness. In this study, mindfulness means being present in each moment in order to focus attention and be totally engaged with whatever is happening, with compassion, curiosity and openness (non-judgement). The participants in this study learned various exercises to strengthen and build their individual mindfulness.

Benefits of mindfulness

In the health sector, a range of benefits of mindfulness have been noted for individual patients with a variety of medical ailments over the past 30 years. Since 2004, research in education began to focus on mindfulness for general wellbeing for all which has also been a recent focus for health related studies. Benefits included reduced anxiety and emotion regulation noted in reductions in stress-cortisol (Willis, 2007; Fogarty, 2009) and a thickening of the prefrontal cortex which is associated with emotion regulation (Lazar et al.,

2005; Cahn & Polich, 2006). Yook et al. (2008) found through a series of questionnaires that participants reported improved sleep patterns. Improvements in attention and focus were shown in two studies (Tang et al, 2007; Jha, Krompinger, & Baime, 2007) using the ANT (Attention Network Test) designed by Rueda, Fan, McCandliss, Halparin, Gruber, Lercari & Posner, 2004). In two separate studies in 2008, Zykłowska et al. and Semple and Lee (2008), similar positive results were confirmed for a number of people with ADHD who had participated in mindfulness training. Additional benefits of mindfulness may also improve a teacher's ability to make decisions and choices for effective classroom practice. All of the benefits described here would be useful for all teachers.

Mindfulness for Teachers

Before undertaking this study with beginning teachers, mindfulness research in the field of education was reviewed. The key focus of mindfulness in education research focuses on the effects of mindfulness for students in the classroom to promote general wellbeing, yet limited studies of the value of mindfulness for teachers themselves have been conducted. Stress reduction was noted for pre-service teachers following a study of mindfulness at Victoria University in Melbourne (Kostanski, 2007) and in a similar study by Poulin, Mackenzie, Soloway and Karayolas (2008) in Canada. Ongoing research at Naropa University in Colorado (Boyce, 2007) noted that mindfulness meditation promoted new learning and personal development for teacher trainees. The benefits reported in these studies with pre-service teachers prompted the research reported in this article. More recently in a study conducted by Flook, Goldberg, Pinger, Bonus and Davidson (2013), 18 teachers showed significant improvement in attention and focus, self-compassion, and psychological symptoms and reductions in burnout as compared to a control group.

Across the United States, a growing number of professional development programmes for teachers that include mindfulness have been established, such as Parker Palmer's *Courage to Teach* (Intrator & Kunzman, 2006), *Cultivating Emotional Balance* at the University of California, San Francisco (Mind and Life Institute, 2007), and *Cultivating Awareness and Resilience in Education (CARE)* at the Garrison Institute in New York (Jennings, Snowberg, Coccia, and Greenberg (2011); all showing a range of benefits including increased self-regulation, attention and non-judgemental awareness, key mindfulness skills.

As noted above, there are a greater number of studies detailing the effects of mindfulness for students when used in classroom programmes. Following a conference in Vancouver, British Columbia, a number of small research projects in the tertiary education field were summarised in a book by Hocking, Haskell and Linds (2001) indicating initial positive results. Zajonc (2006), Boyce (2007) and Hyland (2010) also reported similar benefits in their studies with tertiary students; Hyland also adding that mindfulness exercises improved learning.

The research in mindfulness for students and teachers provided a foundation for the study of mindfulness for beginning teachers highlighted in this article. The research considered the effect of mindfulness in reducing stress during the first year of teaching and in enhancing the ability of the teachers to cope with the demands of the classroom. This article reviews the results of the study of beginning teachers using mindfulness as well as implications for initial teacher education and professional development programmes. Directions for future research for classroom implementation including further investigation of benefits of introducing mindfulness to children and adults in all educational settings is also discussed.

Design of the study

Forty-three primary school teacher education students at AUT University in Auckland, New Zealand, were introduced to mindfulness and a series of strategies to build mindfulness in everyday life. The ‘deliberate’ mindfulness strategies practiced by the participants included: mindful eating, breath awareness, body scan, sitting meditation, and walking meditation. Student teachers were encouraged to employ mindfulness in every moment of their own daily lives (e.g. brushing their teeth, driving, planning lessons for students). Student teachers engaged in one of the practices in each lecture for twelve sessions in their first year of study; eleven in their second year and ten in their final year. Each strategy was introduced during the first year of their academic studies and one exercise was practiced once per week at the start of a lecture for approximately ten minutes. (See appendix for specific details of these practices.) Activities were included in lectures in a number of papers throughout their three year study. Additional opportunities were available at lunchtime sessions.

Participants who volunteered to be a part of the study, after securing their first teaching position, engaged in a full-day review session (retreat) with a mindfulness trainer. The four female participants and one male participant taught in a variety of settings (early childhood, primary, relief teaching, a Montessori unit and an international school).

The following research question underpinned this study: What is the lived professional experience of beginning teachers who have been introduced to mindfulness during initial teacher education? The question had two key components:

- What effect does mindfulness have on the personal and professional resilience of these beginning teachers in their individual contexts?
- Can introducing mindfulness lead to greater ability to cope with the demands of the first years of teaching, and possibly lead to improved academic achievement and social relationships for students?

Data gathering and analysis

After being introduced to and engaging with mindfulness and activities to build their mindfulness skills, the five participants completed fortnightly journal entries during their first year of teaching. Each participant was then interviewed three times: after the first five journal entries, after the next five journal entries and then following the first term of their second year of teaching. This data was read, cross-checked for comparisons by the researcher, meditated upon, and then key ideas and themes written up in draft form for participants to review and discuss with the researcher. From these discussions, key aspects of their first year of teaching were described noting effects of mindfulness on: their personal and professional wellbeing, their teaching, and their desire to remain in the profession.

The data was interpreted using hermeneutic phenomenology. Using phenomenology a researcher is able to study the lived experience of a ‘being’ or person (Heidegger, 1953/1996; 75/92; Husserl, 1962/2002). Phenomenology can then be used as a way of knowing or interpreting the information from those lived experiences; requiring focussed awareness so that the experience or object can be described in detail (Husserl, 1962/2002). As a result, understanding or knowledge is gained about each ‘being’s’ perspective of the lived experience (Heidegger, 1975/1992). In this study, phenomenology was used to describe in detail the lived experiences of beginning teachers using mindfulness; what actually happened to them as a result of engaging with mindfulness practices. Hermeneutics joins with phenomenology to allow the researcher and the participants to understand and interpret how to describe those lived experiences and what those experiences might mean to

the researcher and to the participants to add to the body of knowledge related to the lived experiences of first year teachers.

Hermeneutics is the art of interpretation to gain insights about information; (Dowling, 2004). In this study, the beginning teachers' lived experiences using mindfulness were used to provide insights about a potential resilience strategy. A significant aspect of hermeneutics is that interpretation goes beyond what is seen on first perception but goes deeper into the context of the individual or other related factors to paint a more detailed picture (Heidegger, 1975/1992; 1953/1996; Dowling, 2004). Researchers and participants 'play' with the data and the subsequent interpretation going back and forth in a hermeneutic circle (Gadamer, 1960/1995; 1976) allowing individual contexts and perceptions to influence the analysis in the final stages.

Two different phenomenological processes were used to interpret the data. Firstly, the data was analysed using a lens based upon Husserl's (1976/1985) proposal that with focused concentration on an object or experience, a researcher would be able to describe the essence of a particular phenomenon; in this case, the experience of beginning teachers using mindfulness. This description would not be influenced by personal history or pre-conceptions. In contrast, Heidegger (1953/1996) believed that it was impossible to 'bracket' personal history and pre-conceptions which were built up over time and were an integral part of a 'being's' ability to interpret. Therefore, in the second phase of data analysis, the researcher drew upon personal history with mindfulness, pre-conceptions and individual contexts to draw insights beyond the initial descriptions of the beginning teacher's experiences.

Mindfulness meditation was also used to gain knowledge in the data interpretation cycle. Zajonc (2009), outlined a contemplative inquiry model incorporating mindfulness that he proposed is as important to gaining new knowledge as a scientific positivist research approach (Zajonc, 2009). Zajonc's model was drawn upon to interpret data and present the findings. This epistemology of love, used by Zajonc, has nine components to serve as a guide when engaging in contemplative inquiry: "respect for the 'other' and what he/she brings; gentleness; intimacy; participation; vulnerability *so* the meditator is open to the confusion, the jumble of emotions, feelings and thoughts; transformation; organ formation (creating new understanding; new ideas); illumination, a specific light shining on the new organ in meditation to perceive it from all angles and new insight" (Zajonc, 2009, p. 187).

As part of the data interpretation cycle, interview transcripts and journal entries were read and reread, followed by a mindful meditation, and then a period of writing. The mindful meditation started with a focused concentration to describe the phenomenon using a Husserlian lens followed by a deeper meditation to gain new insights using a Heideggerian lens. The researcher and the participants then engaged in a hermeneutic circle of interpretation as described above to refine the descriptions of their lived experiences.

Findings

Each of the five participants developed their own form of mindfulness practice based on the exercises they were initially shown. Although they were using mindfulness in their everyday activities (gardening, talking to students), several of the participants did not engage in formal mindfulness practice until the end of the second term when they felt overwhelmed with stress. A variety of practices were used by different participants but all participants engaged with the body scan and breath focus regularly.

All of the participants were aware that they were ‘noticing’ and observant in the moment. One of the participants was pleased with her ability to notice children’s needs and be able to respond. Another noticed that her own body language changed and her muscles tensed when she had to focus on behaviour management instead of her lesson. One participant described her greater efficiency throughout the day because she was mindful in each moment. The participants noticed a reduction in stress once they had been engaging in the practice more regularly. More regular practice was evident after the end of term 2 when each participant was feeling the stress of coping with the demands of the classroom. They were also finding that their lessons were more creative and that they were able to integrate actual mindfulness practices into their teaching.

Key themes that emerged included: striving for perfection, connecting through awareness, and gaining authenticity.

Striving for perfection: Once participants focused on a regular mindfulness routine, they found that they were judging their own practice. Non-striving is a very important aspect of mindfulness which was very difficult for the beginning teachers who were constantly asking themselves: ‘how do I practice it better myself, finding the time within my busy schedule?. When this was pointed out to them, they were reminded to be non-judgemental of themselves and began to see how they could connect this to their awareness of children’s behaviour so they could respond rather than react in each moment in the classroom.

Several of the participants were perfectionists; particularly Robert who used mindfulness to improve his soccer playing as well. He was often striving for perfection in his lessons:

Will I get through this lesson? Will my teaching be good? What will happen next? Will my transition be good? Are the children actually learning? I had all these things going through my mind.

(Robert, first interview, June 2010)

In his classroom, because sports and personal fitness were very important to Robert, mindfulness practices were often related to healthy eating and physical education activities.

One participant spoke of a group of students that was particularly difficult to work with, but once she began using mindfulness regularly and to reflect on these students and how she was teaching them, her teaching became more creative, and the students more interested in what she was teaching, and therefore were engaged in learning, not misbehaviour.

‘Striving for perfection’ in all aspects of their teaching was very stressful for the participants who found Term 2 of the school year overwhelming. The enthusiasm of students and teachers from the start of the year had worn off and was compounded by winter illnesses. They continued to try to ‘get everything right’. Debbie described this as:

A steady flow of things you have to do. You HAVE to do. You have to do. You don’t ever feel like you’ve achieved something, and I think I found it’s really important to sit back and think.

(Debbie, second interview, November 2010)

By engaging with the mindfulness practices, the participants found that in Term 3 and Term 4, perceptions of these difficult times had changed. All participants felt they were responding with greater clarity and more mindfulness and were therefore, less stressed. All participants discussed the importance of setting aside time for meditation of various kinds to de-stress. By the end of the year, they had all come to the conclusion that it was important to *always* engage with mindfulness so that the stressful times were less stressful.

Connecting through awareness: Participants were aware of a variety of connections with mindfulness that they had not noticed before: people they met were using mindfulness

including the Te reo Māori teacher. One participant found that mindfulness principles were evident in Steiner's philosophy of education and that therefore she could use her own philosophy of education which was influenced by Steiner to improve her classroom pedagogy. The participants found that being mindfully aware helped them to be true to their own beliefs about all aspects of classroom teaching practice. Participants also noticed clearly how students were making connecting with the activities:

For the younger groups, I think you just have to make it a bit shorter...just focus on two parts of the body, maybe. Mindful walking, I haven't found that successful with year 2s...it's more mindful running. The older classes from year 4 upwards, it works really well. They follow the instructions a lot better. (Laura, first interview, June 2010)

Gaining authenticity: Findings from this study indicated that stressful periods, such as student assessment and parent interviews can trigger first time use. Participants developed acceptance of themselves as practitioners and discovered the value of professional dialogue with their colleagues and with me, the researcher. Finally, I also noted that the participants over the year had developed the characteristics of mindful teachers: authority, authenticity, friendliness (McCown, Reibel, & Micozzi, 2010). Valerie provided a detailed example of the attributes of authority, authenticity and friendliness. She had been struggling with the behaviour of one group of children when teaching a science lesson particularly because she was teaching in an international school and was required to use 'traditional' teaching methods.

Two days a week I teach grade 1 science. Grade 1s are the hardest class to remain present in. They demand so much of your attention and energy. Even before considering what content you are teaching.

(Valerie, journal entry, November 2010)

She discussed this further in her first interview.

I guess when I am in that class I feel like I try to use my body language as well to come across as assertive as well which I don't enjoy doing. I feel a discrepancy between what I was trained to do, especially in Steiner, and the teacher I am almost forced to be in that 'science' class.

(Valerie, first

interview, January 2011).

Using mindful meditation, Valerie noted that she was aware of the tension in her body, the children's behaviour, as well as the discrepancy between how she was teaching and her personal philosophy of teaching. From that point, during meditation, she often focused on this group, and then began to teach the science concepts through story and art which she preferred and so did the students; she engaged with the children and found she no longer had to 'fix' their behaviour. The tension in her body was gone, and the children were actually learning the science material.

To summarise the key findings of this study, I turn to the words of one of the participants who noted:

I dedicate (mindfulness) practice to certain children in my class. My body and mind are much more relaxed and ready to take on whatever happens next. I can reflect on it as I go. So if I find I am getting negative or worried about something, then I can actually go to 'why' right away and look at my perceptions. Usually I can work it out, take perspective, and try to sort it out from there. Definitely reflecting at the end of

the day about what happened in the day and what you have to do.

Do the other stuff obviously, but just maybe try to focus on or be mindful of one thing at a time, don't try to do it all at once. I've learned over the last year that I kind of try to jump into things and I try to be perfect at them right away. And often I'll then feel a bit upset if it's not perfect. But when I take a step back I can see the steps I need to do to get to that point (where everything is accomplished adequately, though perhaps not perfectly).

(Valerie, final interview, August 2011)

Overall findings showed that participants highlighted their greater resilience by using mindfulness. Their stress levels were reduced, they could focus their full attention on the lesson planning and on their students, and they were more authentic in their teaching. In addition, they found they were responding rather than reacting emotionally to the children in their classrooms.

Implications and Future Directions

The participants in this study all believed, as evidenced in their journals and interview transcripts, that mindfulness had made a significant difference in their ability to cope with the stresses of the first year of teaching. All participants continued to use the practices when interviewed again during their second year of teaching. These findings contribute to the growing body of research in the positive benefits of mindfulness.

This study adds to the body of knowledge of mindfulness for beginning teachers at an individual level to help manage responses to stress, and at a pedagogical level for 'mindful' learning strategies to assist learning. Further, this study contributes to the body of knowledge for mindfulness in research design: mindfulness, as a way of knowing and finding out information using Zajonc's epistemology of love, alongside hermeneutical phenomenology. This is one of very few qualitative studies that used mindfulness in the data interpretation process.

Suggestions for future research in mindfulness in education could focus on organising, conducting and supervising studies in three major areas: specific strategies of mindfulness that work best for teachers' personal and professional use and their inclusion in teacher education programmes; strategies to create a mindful learning environment for young children including an 'effective' mindful teacher profile, and benefits of introducing mindfulness for children in the classroom.

The most significant contribution to the research is that mindfulness has been shown to be identified as a potentially valuable component of teacher education programmes. This study could provide valuable guidance for those considering the importance of pastoral care and resilience training for teachers. This research is relevant for individual teachers who seek ways to cope with classroom stress and different pedagogical methods to foster student achievement. At a higher level, this research should be considered by curriculum planners and educators who develop teacher training or professional development programmes.

References

- Boyce, B. (2007). Please help me learn who I am. *Shambala Sun*, 15(3), 66-73, 119.
- Cahn, B. R., & Polich, J. (2006). Meditation states and traits: EEG, ERP, and Neuroimaging studies. *Psychological Bulletin* 132(2), 180-211. <http://dx.doi.org/10.1037/0033-2909.132.2.180>
- Cameron, M., Baker, R., & Lovett, S. (2006). *Teachers of promise: Getting started in teaching*. Wellington, New Zealand: New Zealand Council for Educational Research.
- Dowling, M. (2004). Hermeneutics: An exploration. *Nurse Researcher* 11(4), 30-40. <http://dx.doi.org/10.7748/nr2004.07.11.4.30.c6213>
- Elvidge, C. (2002). *Teacher supply: Beginning teacher characteristics and mobility*. Wellington, New Zealand: Demographics and Statistical Analysis Unit, Ministry of Education.
- Flook, L., Goldberg, S. B., Pinger, L., Bonus, K., * Davidson, R. J. (2013). Mindfulness for teachers: A pilot study to assess effects on stress, burnout, and teaching efficacy. *Mind, Brain and Education* 7(3), 182-195. <http://dx.doi.org/10.1111/mbe.12026>
- Fogarty, F. (2009). *A comparison of mindfulness meditators and non-meditators following writing about negative emotional memories: Are their psychological and physiological responses different?* Unpublished Masters thesis. University of Auckland. Auckland, New Zealand.
- Gadamer, H-G. (1960/1995). *Truth and method* (2nd ed.). New York, NY: Continuum.
- Gadamer, H-G. (1976). *Philosophical hermeneutics*. Berkeley, CA: UC Press.
- Gethin, R. (2011). On some definitions of mindfulness. *Contemporary Buddhism* 12(1), 263-279. <http://dx.doi.org/10.1080/14639947.2011.564843>
- Gless, J., & Moir, E. (2004). *Beyond retention: Mentoring new teachers for instructional excellence*. Santa Cruz, CA: University of California, Santa Cruz New Teacher Center.
- Heidegger, M. (1953/1996). *Being and time*. Translated by Joan Stambaugh. Albany, NY: State University of New York Press.
- Heidegger, M. (1975/1982). *The basic problems of phenomenology*. Bloomington, IN: Indiana University Press.
- Hocking, B., Haskell, J. & Linds, W. (2001). *Unfolding bodymind: Exploring possibility through education*. Brandon, VT: Foundation for Educational Renewal.
- Husserl, E. (1962/2002). The phenomenological theory of meaning and of meaning-apprehension. In K. Mueller-Vollmer (Ed.). *The hermeneutics reader*. (pp. 165-186). New York, NY: Continuum.
- Husserl, E. (1976/1985). The phenomenological theory of meaning and of meaning-apprehension. In K. Mueller-Vollmer (Ed.). *The hermeneutics reader*. (pp. 165-186). New York, NY: Continuum.
- Hyland, T. (2010). Mindfulness, adult learning and therapeutic education: Integrating the cognitive and affective domains of learning. *International Journal of Lifelong Education*, 29(5), 517-532. doi:10.1080/02601370.2010.512792
- Intrator, S.M., & Kunzman, R. (2006). Starting with soul. *Educational leadership*, 63(6), 39-42. Retrieved from www.ascd.org/publications/educational_leadership.aspx
- Jennings, P. A., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2011). Improving classroom learning environments with CARE: Results of two pilot studies. *Journal of Classroom Interaction* 46(1), 37-48.

- Jha, A. P., Krompinger, J., & Baimer, M. J. (2007). Mindfulness training modifies subsystems of attention. *Cognitive, Affective and Behavioral Neuroscience*, 7(2), 109-119. doi:10.3758/cabn.7.2.109. <http://dx.doi.org/10.3758/CABN.7.2.109>
- Kabat-Zinn, J. (2003). Mindfulness-Based Interventions in Context: Past, Present, and Future. *Clinical Psychology: Science and Practice* 10(2), 144-156. <http://dx.doi.org/10.1093/clipsy.bpg016>
- Kabat-Zinn, J. (2005) *Coming to our senses: Healing ourselves and the world through mindfulness*. New York, NY: Hyperion Press.
- Kostanski, M. (2007, November). *The role of mindfulness in reducing stress for pre-service students*. Paper presented at the Australian Association for Research in Education Conference. Retrieved 8 December 2010 from www.aare.edu.au/07/pap/kos07569.pdf
- Langer, E.J. (1997). *The power of mindful learning*. New York, NY: Addison-Wesley-Publishing.
- Lazar, S.W., Kerr, C.E., Wasserman, R.H., Gray, J.R., Greve, D.N., Treadway, M.T., McGarvey, M., Quinn, B.T., Dusek, J.A., Benson, H., Rauch, S.L., Moore, C.I., & Fischl, B. (2005). Meditation experience is associated with increased cortical thickness. *Neuroreport* 16(17), 1893-1897. <http://dx.doi.org/10.1097/01.wnr.0000186598.66243.19>
- Mind and Life Institute. (2007). *The Cultivating Emotional Balance Program*. Retrieved 24 November, 2008 from <http://cc.msnsnscache.com/cache.aspx?q=university+of+california+san+francisco+cultivating+emotional+balance&d=74460963999373&mkt=en-NZ&setlang=en-NZ&w=3cd0bac.d39bd131>
- Pohatu, T. (2000). *Ata: Growing respectful relationships*. Auckland, New Zealand: Self-published article.
- Poulin, P. A., Mackenzie, C. S., Soloway, G., Karayolas, E. (2008). Mindfulness training as an evidenced-based approach to reducing stress and promoting wellbeing among human services professionals. *International Journal of Health Promotion & Education* 46(2), 72-80. <http://dx.doi.org/10.1080/14635240.2008.10708132>
- Rueda, M. R., Fan, J., McCandliss, B.D., Halparin, J. D., Gruber, D. B., Lercari, L. P., Posner, M. (2004). Development of attentional networks in childhood. *Neuropsychologia*, 42(8), 1029-1040. <http://dx.doi.org/10.1016/j.neuropsychologia.2003.12.012>
- May, D. (2006). *The stress reduction and relaxation programme workbook*. Auckland, New Zealand: Author.
- McCown, D., Reibel, Micozzi, M. S. (2010). *Teaching mindfulness: A practical guide for clinicians and educators*. New York, NY: Springer. <http://dx.doi.org/10.1007/978-0-387-09484-7>
- Semple, R.J. & Lee, J. (2008). Treating anxiety with mindfulness: Mindfulness-based cognitive therapy for children. *Acceptance and mindfulness treatments for children & adolescents: A practitioner's guide*. (pp. 63- 87). Oakland, CA: New Harbinger Publications.
- Sharples, B. (2003). *Meditation: Calming the mind*. Melbourne, Australia: Lothian Books.
- Tang, Y., Ma, Y., Wang, J., Fan, Y., Feng, S., Lu, Q., Yu, Q., Sui, D., Rothbart, M.K., Fan, M. & Posner, M.I. (2007). Short-term meditation training improves attention and self-regulation. *PNAS*, 104(43), 17152-17156. <http://dx.doi.org/10.1073/pnas.0707678104>
- Viola, S. (2009). Foreword. In D. Schoeberlein. *Mindful teaching and teaching mindfulness: A guide for anyone who teaches anything*. Boston, MA: Wisdom Publications.

- Willis, J. (2007). *Introduction to ME: Mindfulness Education program*. Vancouver, Canada: Goldie Hawn Foundation.
- Yook, K., Lee, S.-H., Ryi, M., Kim, K.-H, Bhoi, T. I., Suh, S. Y., et al. (2008). Usefulness of mindfulness-based cognitive therapy for treating insomnia in patients with anxiety disorders. *Journal of Nervous and Mental Disease*, 196(6), 501-503.
<http://dx.doi.org/10.1097/NMD.0b013e31817762ac>
- Zajonc, A. (2006). Love and knowledge: Recovering the heart of learning through contemplation. *Teachers College Record* 108(9), 1742-1759.
<http://dx.doi.org/10.1111/j.1467-9620.2006.00758.x>
- Zajonc, A. (2009). *Meditation as contemplative inquiry: When knowing becomes love*. Great Barrington, MA: Lindisfarne Books.
- Zyklowska, L., Ackerman, D., Yang, M., Futrell, J., Horton, N., Hale, T. S., Pataki, C., & Smalley, S. (2008). Mindfulness meditation training in adults and adolescents with ADHD: A feasibility study. *Journal of Attention Disorders*, 11(6), 737-746.
<http://dx.doi.org/10.1177/1087054707308502>

Appendix: Mindfulness practices introduced

Initial teacher education students were asked to cultivate a beginner's mind when learning these exercises, where the mind is open to seeing everything as if this viewing was the first one, without preconceived notions. These practices were adapted from Kabat-Zinn (2005) and May (2006).

Raisin exercise-using all five senses to notice and observe whatever is possible about a raisin for each individual. This process is completed very slowly and is designed to cultivate the 'beginner's mind' attitude when perceiving something new; also called "mindful eating".

Sensations of breath- focusing on the sensations of breath including where it comes in and leaves the body; breathing in and breathing out for around ten minutes.

Body sensations in **body scan**-noticing and observing each part of the body starting with the toes of the left foot and moving all the way up to the top of the head. Again, this is a very slow process to build focus on a particular object. This can be done with the eyes opened or closed and is usually done lying on the floor. The length of time for this exercise varied depending on the participant.

Sitting meditation-paying attention to whatever comes into consciousness. When this is introduced, participants are directed to focus first on body sensations, then feelings, then sounds and then thoughts without getting attached to any particular one. The idea is to simply be aware of what is in consciousness without making judgement on whether it is good or bad, pleasant or unpleasant. Participants sat for different amounts of time; this was introduced as a ten minute exercise which participants could expand upon in their own practice.

Mindful walking-observing and noticing what happens in the body when taking each step. Participants walk back and forth very slowly in a small area where there are no distractions.