

**PERCEPTIONS OF A MINDFULNESS
INTERVENTION TO MANAGE STRESS
AND SUPPORT THE
EMOTIONAL WORK OF TEACHERS IN
ALTERNATIVE SCHOOLS.**

Kim Elizabeth Preston

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Abstract

Teachers routinely engage in high levels of emotional work which can result in stress and emotional exhaustion if effective emotion regulation strategies are not employed. The impact of this emotional work is arguably heightened in the case of teachers in alternative schools who work with students with complex social and emotional needs. Research suggests that professional development is required to provide support for the emotionally demanding workloads of staff in alternative schools. Mindfulness, or present moment awareness, is a Buddhist concept which has recently been adapted in a variety of contexts to address multiple conditions, including stress and general well-being. Within the context of schools, it is argued that mindfulness interventions may operate to enhance the emotional work of teachers by developing effective emotion regulation strategies. This study used a case study design to explore the perceived impact of a six week school-based mindfulness intervention as a tool to manage stress and support the emotional work of teachers. A group of four educators based at a metropolitan Queensland alternative school participated in the intervention. The study took a mixed methods approach to data collection, which included self-report questionnaires, interview responses and journal reflections. The study's results supported the model of mindful emotion regulation which formed the theoretical framework for the intervention. A number of limitations inherent in the research design, such as small sample size and lack of experimental design, impact on the generalisability of the study's findings. However, overall, the study revealed a range of beneficial outcomes emerging in association with the mindfulness intervention. The study also suggested implications for the future use of mindfulness within an alternative school context.

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List of Abbreviations

DASS21	Depression Anxiety and Stress Scale (21 item questionnaire)
ERA	Emotion Regulation Ability
ERQ	Emotion Regulation Questionnaire
FFMQ	Five Facet Mindfulness Questionnaire
FLC	Flexible Learning Centre
MBI	Maslach Burnout Inventory
MBI	Mindfulness Based Intervention
MBSR	Mindfulness Based Stress Reduction
QCAA	Queensland Curriculum and Assessment Authority
QCT	Queensland College of Teachers
SEC	Social and Emotional Competence
VET	Vocational Education and Training

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: [QUT Verified Signature](#)

Date: July 2017

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Chapter 1: Introduction

This chapter provides the background (section 1.1) and context (section 1.2) of the research. Section 1.3 describes the purpose and scope of the research and includes preliminary definitions of key terms used. Section 1.4 outlines the structure of the remainder of the thesis. Finally, section 1.5 provides a brief overview of the significance of this study.

1.1 BACKGROUND

Teaching is emotional work. Situations regularly encountered by teachers have the capacity to provoke reactions ranging from satisfaction and joy, to anxiety and guilt. Thus, while the emotional content of teaching can be a source of either motivation or frustration, teachers need effective emotional skills in order to meet the demands of their work (Fried, Mansfield & Dobozy, 2015). Moreover, the complex emotional investment required of teachers can lead to stress, or ultimately burnout, if effective emotion regulation strategies are not employed. Unfortunately, research indicates that many teachers do not have the resources to cope effectively with the daily barrage of stressors to which they are exposed (Fried et al., 2015; Skinner & Beers, 2016). Thus, teacher stress and burnout are increasingly being recognised as serious problems, both nationally and internationally (Buchanan, 2012; Fried et al., 2015; Pillay, Goddard & Wilss, 2005). Regular recurrence of stressful situations over an extended period of time, together with inadequate coping skills, appear to be central to the incidence of stress and burnout (Fried et al., 2015; Jennings & Greenberg, 2009). Effective emotion regulation skills are, thus, critical to support the emotional work of teachers and to enhance teacher well-being (Fried et al., 2015).

1.2 CONTEXT

This study focuses specifically on the emotional work of teachers in an alternative school setting. Research indicates that issues relating to teacher emotional well-being may be heightened within the context of alternative schools (Mills & McGregor, 2010; te Riele, 2012). This is the result of several factors unique to the learning environments of alternative schools.

Alternative schools provide educational opportunities for students whose needs are not met by the conventional school system (Wilson, Stemp & McGinty, 2011). While alternative schools deliver basic academic programs, they also prioritise the social and emotional welfare of their students (McGregor & Mills, 2012; Mills & McGregor, 2010). This priority is critical due to the complex social, emotional, physical, and intellectual needs often experienced by the young people attending these schools (McGregor & Mills, 2012). In recognition of these needs, alternative schools place an emphasis on relationships and community to facilitate the continued educational engagement of these young people (McKeown, 2011; McGregor & Mills, 2012; Morgan, Pendergast, Brown & Heck, 2015). To cultivate this strong sense of community, alternative schools require dedicated and well-trained staff who understand the complex emotional needs of their student population (Wilson, et al., 2011). Unfortunately, however, the difficulty of finding and retaining alternative school staff is one of the central themes in the literature (Lehr, Moreau, Lange, & Lanners, 2004; Lehr & Lange, 2003; McIntyre, 2010; te Riele, 2012).

The emotionally demanding and often stressful nature of the work of teachers employed in alternative schools impacts on the long-term viability of staff (Mills & McGregor, 2010). A number of research initiatives have noted that professional development in alternative schools needs to be a priority in order to support the retention of staff, without whom, the options of already disenfranchised young people become further limited (Lehr et al., 2004; Lehr & Lange, 2003; te Riele, 2012). In Australia, the 2013 Victoria Institute report identified 70,000 young people in more than 900 alternative education programs in over 2,000 locations nationwide (te Riele, 2014). In order to continue providing educational alternatives for these students, staff support is an area which desperately needs attention (te Riele, 2012).

1.3 PURPOSE AND SCOPE

Against the backdrop of the emotional work of teachers and related issues of staff support and retention, the aim of this study is to address the need to provide support for the emotional work of alternative school teachers. The study implemented a professional development intervention for teachers based upon the relationship between emotions, emotion regulation ability and mindfulness, key terms which are explained in the following sections.

1.3.1 Emotions

While the term ‘emotion’ is generally understood in common parlance, there is no consensus around the meaning of the term either within or between various fields of research (Izard, 2010). Over the last three decades, a breadth of literature devoted to the theme of emotions has emerged in fields as varied as neuroscience, philosophy, psychology, linguistics and anthropology (Dixon, 2012; Izard, 2010). In 1859, Bain defined emotion, rather broadly, as “all that is understood by feelings, states of feeling, pleasures, pain, passions, sentiments, affections” (Bain, 1859, p. 3). Dixon questions the meaningfulness of this definition, asking: “How could anyone possibly devise a single theory...that could cover such a wide range of different mental states?” In response to his own question, he replies: “The answer is that no one could.” (Dixon, 2012, p. 340).

In fact, the term has been referred to as a ‘keyword in crisis’ (Dixon, 2012) and doubts have been raised as to whether ‘emotion’ is even a useful term in research circles (Russell, 2012). An in-depth discussion of the definitional confusion surrounding the term is beyond the scope of this research. However, given the ambiguity of the term, previous research emphasises that ‘emotion’ *must* be defined and contextualised in order to work towards enhanced clarity in the field of emotions research (Izard, 2010).

While acknowledging the ambiguity of the term, then, for the purposes of this research, emotions are defined as episodic affective states, either positive or negative, which are typically evoked as a result of specific events, and which give rise to behavioural responses (Gross, 2015; Mulligan & Scherer, 2012). According to this definition, emotions involve “loosely coupled changes in the domains of subjective experience, behaviour and peripheral physiology” (Gross, 2015, p. 3). In addition, the definition of emotion adopted in this study recognises that it is important to understand how the experiential, behavioural and physiological aspects of emotion interact with the social domain (Corcoran & Tormey, 2012; Fried et al., 2015). This is particularly critical given the context of this study which recognises the relationship between teacher emotions and the highly social and interpersonal nature of the work which teachers perform (Fried et al., 2015).

This definition may be refuted, for example by neuroscientists such as LeDoux (2012), who concludes that the term ‘emotion’ does not apply to everyday states,

such as fear or joy, but rather is the domain of more basic functions, such as reproduction or homeostasis. However, the reasons for adopting this definition (as outlined in the previous paragraph) are twofold. First, this definition underpins the model of emotion regulation which forms the theoretical framework of this study, as discussed in section 2.4. Second, the definition captures the multi-dimensionality of the term as an affective state which encompasses subjective, behavioural, physiological and social aspects. These factors each play a role in understanding the emotional work which teachers perform.

The definition also impacts upon the research methodology adopted in this study. Given the vastly different ways in which the various aspects of emotion are experienced and expressed, a mixed methods approach to research, informed by both constructivist and post-positivistic methodologies, has been adopted in order to capture both subjective and objective experiences of emotion. A post-positivist stance suggests that there are *objective* aspects to *subjective* reality which we can examine through objective data collection processes (Guba & Lincoln, 2005). The current research design acknowledges, however, that emotions are individual and unique. As a result, objective measures of emotion, while useful, are not always accurate. Thus, the current research design supplements more objective data collection processes with qualitative measures to assist in capturing the multidimensional nature of teachers' emotional experiences (Fried et al., 2015).

1.3.2 Emotion regulation ability

The processes by which we attempt to control which emotions we experience, and how we express those emotions, are encompassed by the term 'emotion regulation ability' (Gross, 2002). Interestingly, the literature suggests that the timing of emotion regulation plays a critical role in determining the physiological, cognitive, social and emotional consequences of our emotions, whether positive or negative. The earlier one is able to regulate emotion, the more benefits ensue (Tsouloupas, Carson, Matthews, Grawitch, & Barber, 2010). The notion of timing, thus, forms a key component of this study which incorporates the practice of *mindfulness* in a teacher intervention to assist in the development of proactive emotion regulation strategies. Teachers with effective emotion regulation strategies deal more effectively with the demands of teaching (Brackett, Palomera, Kaja, Reyes, & Salovey, 2010). An understanding of emotion regulation ability may therefore

provide an important pathway towards reducing stress and supporting the emotional work of teachers.

1.3.3 Mindfulness

Mindfulness is a Buddhist concept which can be defined as “remember(ing) to pay attention to what is occurring in one’s immediate experience with care and discernment” (Wallace & Bodhi, 2006, p. 12). Mindfulness has a long history in Eastern traditions. Moreover, an ongoing contemplative stream has permeated both Christian and Western secular explorations of lived experience since at least the first century AD (Keating, 1997). There was also some appreciation of the significance of Eastern meditative traditions by twentieth century Western psychologists such as William James (Stanley, 2012) and Carl Jung (Jung, Reed, Fordham, et al., 1958). However, it could be argued that *mainstream* Western interest in mindfulness dates back to just the late twentieth century. The recent surge of Western interest in mindfulness stems from its apparent ability to address a range of psychological and physiological conditions, including stress and general well-being (Brown, Ryan & Creswell, 2007).

The mechanisms underlying the beneficial consequences of mindfulness are the subject of continued research (Shapiro, Carlson, Astin, & Freedman, 2006). However, of interest to the current study, mindfulness has recently been hypothesised to have a positive impact on emotion regulation capacity (e.g. Farb, Anderson, Irving, & Segal, 2013). The theoretical framework of the current study draws heavily on a model of emotion regulation which gives a key role to *attention* deployment, particularly in the early stages of emotion regulation (Farb et al., 2013; Gross, 2015). A central feature of mindfulness – remembering to pay *attention* - could therefore play a part in encouraging proactive emotion regulation. At a time when the alternative school sector is expanding (te Riele, 2012; te Riele, 2014) and teacher demand is on the rise in Australia (Weldon, 2015), there is an increasing need to provide teachers with support (te Riele, 2012). Thus, this study seeks to explore the connection between mindfulness and emotion regulation as a way of providing support for the emotional work of teachers within an alternative school setting.

1.4 SIGNIFICANCE

This study is one of very few studies into the use of mindfulness with alternative school teachers. Thus, the study helps to fill a gap in the research by exploring the perceived impact of mindfulness as a strategy to support the emotional work of teachers in this context. Overall, the study supports the general trend of previous research which reveals beneficial outcomes arising from mindfulness interventions. In addition, the study adds to the research by revealing factors which are perceived by participants as either barriers to mindfulness practice or as supportive of mindfulness practice. Finally, the outcomes of this study suggest implications for the future use of mindfulness within an alternative school context.

1.5 THESIS OUTLINE

This thesis commences with a literature review which synthesises existing theoretical frameworks and empirical research related to this study. The review discusses the emotional work of teachers, outlines current research into alternative school settings, explores a theoretical framework and details the potential benefits of mindfulness interventions within educational settings, as well as identifying the gaps in knowledge that the study seeks to address. The research questions which emerge from the literature are then defined.

Following this, the methodology for this study is discussed in chapter 3. An outline of data collection procedures, as well as the process undertaken for data analysis is presented. Finally, considerations for the ethical conduct of this study are outlined. Chapter 4 details the study's results overall, while chapter 5 provides a discussion of the study's findings in relation to the current body of research. Chapter 5 also acknowledges limitations of the study, and concludes with a discussion of the potential significance of the study overall.

Chapter 2: Literature Review

2.1 OVERVIEW OF THE LITERATURE REVIEW

This chapter provides a discussion of the relevant research into the emotional work of teachers, with a particular focus on stress and burnout (section 2.2). Section 2.3 then outlines the context of this study, the alternative education sector, and includes particular consideration of the emotional work performed by alternative school teachers and the consequent need for staff support in this area. Section 2.4 delineates the theoretical framework of the study, discussing the related notions of emotion regulation ability and mindfulness. Section 2.5 discusses the nature and benefits of mindfulness interventions, including an overview of previous studies into the use of mindfulness interventions with educators. Finally, section 2.6 details the research purpose of the current study which emerges from the literature review.

2.2 THE EMOTIONAL WORK OF TEACHERS

“Emotional capital (lies) at the very heart of education.”

- (McGregor & Mills, 2012, p. 847)

2.2.1 Overview

Emotions are intricately linked to many facets of teaching and learning (Fried et al., 2015). The establishment of supportive teacher-student relationships requires emotional investment on the part of teachers and these relationships contribute to a supportive classroom climate, student engagement and improved academic and socio-emotional student outcomes (Fried et al., 2015; Jennings & Greenberg, 2009; McGregor & Mills, 2012). Moreover, while the emotional content of teachers’ work is perhaps most evident in student-teacher relations, interpersonal relationships with colleagues and the wider school network are also critical to an understanding of the emotional work of teachers (Pietarinen, Pyhältö, Soini, & Salmela-Aro, 2013). Thus, on a daily basis, both within and beyond the classroom, teachers encounter a wide variety of situations which require emotional work in order to effectively manage the professional demands of teaching (Fried et al., 2015).

The emotional work inherent in the role of teaching often exacts a toll on the lives of teachers (Precey, 2015). The following sections provide a more detailed

explanation of this emotional toll which may arise in the form of teacher stress and burnout.

2.2.2 Emotions and stress

Teaching is widely regarded as a highly stressful occupation (Johnson et al., 2005; Lomas, Medina, Ivztan, Rupprecht & Eiroa-Orosa, 2017). In the UK, for example, a recent survey of the National Association of Schoolmasters Union of Women Teachers, found that over two-thirds of teacher respondents had considered leaving the profession in the previous 12 months, with 83% reportedly experiencing workplace stress and 67% stating that their job had adversely affected their mental or physical health (Precey, 2015). Similarly, in Australia, the education sector ranks number two for mental health stress claims with demand for mental health services doubling for teachers in the 24 to 29 age group in the past five years (“Teachers’ mental health under the microscope”, 2015).

The highest ranking teacher stressors include maintaining classroom discipline, teaching students who lack motivation, constant evaluation by others, challenging interactions with colleagues, curriculum reform, increasing workload demands, perceived lack of professional support and generally poor working conditions (Kyriacou, 2001; Pietarinen et al., 2013; Precey, 2015).

Moreover, teachers are often under-prepared for the stressful and emotional demands of their work (Woolfolk Hoy, 2013). Thus, stress and poor emotion management rank as the main reasons for teachers leaving the profession (Fried et al., 2015; Richardson, Watt & Devos, 2013). This is particularly the case for early career teachers where attrition rates are alarmingly high (Ewing & Smith, 2003; Marshall, 2013). Research suggests that up to 50% of early career teachers leave the profession within the first five years of teaching, both in Australia and internationally (Gallant & Riley, 2014). In light of high attrition rates and concerns for teacher well-being, research into the related fields of teacher stress and emotion has become a growing field (e.g. Fried et al., 2015; Montgomery & Rupp, 2005).

The idea that emotions are critical to teacher stress is highlighted in recent research on stress (Fried et al., 2015; Lazarus, 2007; Montgomery & Rupp, 2005). This research points to the need to explore teacher emotions in combination with external stressors in order to more fully comprehend the impact of these external

stressors on teacher well-being. The implication of this research is that the adverse effects of stress, whether physiological or psychological, are not exclusively the result of external stressors but are mediated by a number of factors, including teachers' abilities to regulate their emotional responses to external stressors (Chan, 1998; Fried et al., 2015; Montgomery & Rupp, 2005).

Moreover, not only is there increasingly strong empirical evidence which links the emotional work of teachers to stress, there is growing research into the role of emotions in producing a more insidious manifestation of stress, burnout (Brackett et al., 2010; Brotheridge & Grandey, 2002; Carson, 2006; Chang, 2013; Jennings & Greenberg, 2009). The following section provides a discussion of burnout and, more particularly, emotional exhaustion, the core dimension of burnout. This general discussion is followed by a more specific discussion of the nature and causes of teacher burnout.

2.2.3 “Burnout” or emotional exhaustion

Burnout is a condition which develops over time as a result of protracted occupational stress (Freudenberger, 1974). Burnout is typically experienced by human services workers who work in ‘people-oriented’ professions, such as health services, social work, criminal justice and education, and is characterised by emotional fatigue and loss of professional motivation (Maslach & Jackson, 1981). Although burnout is often characterised as a multi-dimensional construct (Maslach & Jackson, 1981), emotional exhaustion has been identified by a number of authors as the core component of burnout (Hulsheger, Alberts, Feinholdt, & Lang, 2013; Maslach, Schaufeli & Leiter, 2001; Tsouloupas et al., 2010). As such, emotional exhaustion has been adopted as the critical identifier of burnout for the purposes of this research.

2.2.4 Teacher emotional exhaustion

Teacher burnout is increasingly being recognised as a serious problem, both internationally and nationally (Buchanan, 2012; Loonstra, Brouwers, & Tomic, 2009). This is not surprising, given the highly social and emotional nature of teacher's work (Fried et al., 2015). In fact, teaching is unique amongst professions in terms of the huge number of inter-personal interactions that teachers engage in on a daily basis – not only with students, but also with colleagues and members of the

wider school community (Weare, 2014). As a result, many of the emotional demands of teaching are related to the highly social context within which they arise.

While it is difficult to establish the proportion of teachers affected by burnout, some studies estimate that one in four beginning teachers suffer from burnout (Ewing & Smith, 2003; Marshall, 2013). The incidence of burnout is concerning, as emotional exhaustion, one of the key components of burnout, has been associated with reduced job performance and impaired health, and is often a precursor to teacher turnover (Tsouloupas et al., 2010).

Like stress, the literature indicates that teacher burnout, particularly emotional exhaustion, occurs for a range of reasons, with individual, societal, environmental and organisational factors playing central roles (Chang, 2009; Leithwood, Menzies, Jantzi, & Leithwood, 2006). However, critical to any understanding of teacher burnout, is its underlying emotional content (Carson, 2006; Zellars, Hochwarter, Perrewé, Hoffman, & Ford, 2004). Like stress, teacher burnout is highly associated with factors related to the social and emotional environment of the school (Evers, Tomic, & Brouwers, 2004; Johnson et al., 2005; Pietarinen et al., 2013). However, the strongest indicator of teacher burnout is the intensity of teacher emotional response to situations which are perceived as stressful (Montgomery & Rupp, 2005). The importance of adaptive emotion regulation becomes evident when we observe that some teachers are vulnerable to emotional exhaustion whilst others are more resilient, which some research suggests is due to more effective emotion regulation skills (Hosotani & Imai-Matsumura, 2011; Newberry, 2010). If teachers are unable to cope effectively with stressors, a negatively reinforcing feedback loop may arise which, over time, may result in burnout (also referred to as ‘burnout cascade’, Jennings & Greenberg, 2009, p. 492).

Fortunately, research suggests that stress and emotional exhaustion are not necessarily permanent states and that, with appropriate assistance, teachers can return to a re-invigorated state which supports their emotional work in the classroom (Chang, 2009). In order to circumvent the development of burnout, teachers need support to develop effective coping and emotion regulation skills relevant to the context of the classroom.

2.3 CONTEXT OF THE STUDY – ALTERNATIVE EDUCATION

The previous section provided an overview of the emotional work of teachers in general. This section transfers this discussion to the specific context of the alternative education sector. This section defines ‘alternative education’ and discusses the growth of alternative education, both internationally and within Australia. This is followed by an overview of issues which impact upon alternative education, with a particular focus on the emotional work of teachers in alternative schools.

2.3.1 Alternative education – towards a definition

‘Alternative education’ is a term used to refer to the provision of educational opportunities outside the mainstream education system (Wilson, et al., 2011). Providing a definition of ‘alternative schools’, ‘alternative education programs’ or ‘flexi-schools’ is, however, problematic, given the recent increase of such schools and the diversity of programs available (te Riele, 2007). International literature describes all educational programs outside the conventional education system as ‘alternative’ (Aron, 2006). In Australia, the Learning Choices website (<http://dusseldorp.org.au/priorities/alternative-learning/learning-choices/>) provides a central location for the dissemination of information about alternative schooling in Australia. The Learning Choices database includes a range of programs which offer pathways to enable young people to continue their education in an inclusive and accommodating environment. As such, alternative schools and programs tend to provide learning opportunities for students who are ‘at-risk’ of withdrawing from the conventional school system (Lehr, Tan, & Ysseldyke, 2009). For the purposes of this paper, the terms ‘alternative schools’, ‘alternative education programs’ and ‘flexi-schools’ will be used interchangeably, depending on the context.

Alternative schools differ from mainstream schooling models in terms of overall environment, curriculum design and implementation (Dyson & Plunkett, 2012). They offer innovative, cooperative and experiential modes of learning which place greater emphasis on community and student collaboration (Dyson & Plunkett, 2012).

In some ways, these schools re-examine the core principles and processes of teaching and learning itself (Dyson & Plunkett, 2012). Thus, it could be argued that

mainstream schools focus on ‘primary’ learning, or direct instruction, with an auxiliary focus on ‘secondary’ learning, or the process of thinking about learning (Bauman, 2001; Dyson & Plunkett, 2012). In contrast, alternative schools could be seen to encourage ‘tertiary’ learning, which cultivates student capacity to live with uncertainty and thereby prepares them for the challenges of life after school (Dyson & Plunkett, 2012). Such an emphasis requires alternative school teachers to take on a different role in relation to their students. Thus, teachers in alternative schools see themselves as facilitators, mentors and role models rather than ‘traditional’ teachers (Dyson & Plunkett, 2012). Their roles centre around the development of rapport with students without the limitations sometimes imposed by more conventional school settings. This rapport is developed through greater emphasis on a sense of community, cultivation of open communication, smaller class sizes and a more holistic approach to behaviour management (Dyson & Plunkett, 2012; EREA, n.d.-b). Teacher-student rapport is also enhanced through the greater freedom and flexibility which alternative schools have in terms of traditional curriculum requirements, often focusing on the development of relevant life-skills which complement more academic skills (Dyson & Plunkett, 2012; EREA, n.d.-b).

2.3.2 Alternative education – providing options for ‘at-risk’ students

A review of the literature reveals the sporadic nature of research into issues facing alternative schools, and more particularly, the role of teachers in these schools (e.g. Shay, 2013; te Riele, 2012). As previously discussed, alternative education programs aim to provide young people with educational opportunities which fall outside the realm of conventional schooling options. These education programs are often designed specifically for young people ‘at-risk’ of failing to complete secondary school education (Lehr et al., 2009). Improving secondary school retention rates is a continuing national priority in Australia; in 2012, the Council of Australian Governments (COAG) set a goal to increase Year 12 educational attainment to 90% of young Australians by 2020 (COAG, 2012). This priority was established through partnership with the Australian State governments which mandated full-time education, training or employment for young people up to 17 years of age (McKeown, 2011; COAG, 2009). This focus resulted in the expansion of alternative education programs seeking to support the educational options of young Australians (te Riele, 2012; te Riele, 2014).

Both internationally and within Australia, there has been a recent increase in the number of students enrolled in alternative education programs. In the USA, for example, estimates identify nearly 11,000 alternative schools and programs for ‘at-risk’ students (Lehr, et al., 2004). Similarly, across Australia, the 2013 Victoria Institute report identified 70,000 students in more than 900 alternative education programs in over 2,000 locations nationwide (te Riele, 2014). In fact, the number of young people seeking to access these programs may be higher as this figure does not include waiting lists for these programs. Moreover, there is limited information available in relation to many alternative education programs, both nationally and internationally, so the actual number of programs is difficult to determine (Shay, 2013). However, it is clear that there is a continuing need for alternative learning options for ‘at-risk’ youth.

The need for alternative learning options stems from a complex range of factors which affect retention rates of ‘at-risk’, ‘disengaged’ or ‘marginalised’ young people. These factors include socio-economic background, gender, family situation, cultural barriers, Indigenous background, low academic performance, and school-based factors, such as conflict with authoritarian school structures, curriculum content and pedagogical practices (McGregor & Mills, 2012). The Australian mainstream school system has been described as “an unfriendly maze of rules and paperwork that is overwhelming to students who are often already disengaged and/or alienated from schooling processes” (McGregor & Mills, 2012, p. 846).

For students who find themselves disengaged from conventional school options, self-marginalisation may seem like the only option. Providing educational options from within these ‘margins’ via alternative schools is a means of working with disengaged students towards educational empowerment (Bland, 2012). Without alternatives, the probability of both short and long-term disadvantage increases for these already marginalised students, including a reduced likelihood of engaging in further education and training, increased dependence on welfare assistance and reduced wage-earning capacity compared to school completers (Wilson et al., 2011). In addition, poor health and community dislocation are often further outcomes of welfare dependence and reduced wage earning capacity (Wilson et al., 2011). Thus, the long-term social and economic consequences of poor schooling retention rates are magnified for those already disengaged from the system. This is perhaps even

more evident in Australia where there is a significant association between non-completion of school and unemployment (OECD, 2007). The continued provision of alternative secondary school options is, thus, critical to ensure more equitable social and economic outcomes for young people who are disengaged from the mainstream school system.

2.3.3 Alternative education – an emphasis on relationships

Although there is limited empirical data on the nature of alternative schooling options, the studies that do exist indicate that these options are critical for the continued engagement of many young Australians with the education system (McGregor & Mills, 2012; McKeown, 2011; Mills & McGregor, 2010; te Riele, 2007). While these schools tend to focus on fundamental academic outcomes, community services, and work-based learning (Lehr et al., 2004), the emotional component of these programs is often critical to their success (McGregor & Mills, 2012; Mills & McGregor, 2010; Morgan, 2013).

An emphasis on relationships between alternative school students and staff, and amongst staff themselves, contributes to an extended sense of community and belonging. This sense of community and belonging is central to ensuring that marginalised young people continue to access alternative education options in Australia (McKeown, 2011; McGregor & Mills, 2012; Mills & McGregor, 2010; Morgan, 2013). In order to create this sense of community, the alternative school system requires dedicated and well-trained staff, with an understanding of the complex social, emotional, physical and intellectual needs of the student population (Wilson et al., 2011). This emphasis on the emotional demands placed on staff of alternative education programs is of fundamental importance to the current study, as the following section details.

2.3.4 The emotional work of teachers in alternative schools

Section 2.2 provided an overview of the emotional work of teachers in general. In an alternative school context, the emotional work of teachers is critical to the well-being of students with potentially more complex emotional and psychological needs than the general student population (Lehr et al., 2004). By extension, then, the emotional demands in this context may have an even greater impact upon teacher well-being.

Although research into alternative schools is limited, the literature which does exist indicates the importance of emotional issues in these schools (e.g. Dyson & Plunkett, 2012; Lehr et al., 2004). Research suggests that 60% of early school leavers experience emotional issues, ranging from despair or low self-esteem to more serious mental health disorders, which can trigger early school-leaving (Gable, Bullock & Evans, 2006). This is reinforced by international literature which suggests that students with emotional and behavioural disabilities attend alternative programs in far greater numbers than in conventional schools (Lehr et al., 2004).

This research highlights the critical function of teachers' emotional investment in their students, particularly in alternative school settings. A national empirical study in the USA reported that, for alternative schools, school completion was significantly correlated with positive teacher qualities (Xia, Izumi & Gao, 2015). Building a sense of community based on supportiveness, care and respect is central to ensuring that young people remain engaged with alternative education programs. The supportive environments which cultivate positive staff-student relationships at alternative schools are, thus, often considered to be a barometer of the quality of these schools (Xia et al., 2015; Mills & McGregor, 2010). The positive emotional connections often developed between the staff and young people at these schools are critical to their effectiveness (McGregor & Mills, 2012; te Riele, 2012) and can literally be 'life changing' for students (Australian Industry Group & Dusseldorp Skills Forum, 2007, p. 35).

In order to teach effectively in an alternative school, teachers need highly-developed self-awareness and inter-personal skills to meet the needs of the students accessing the school (de Jong & Griffiths, 2006). Recent research into educators in alternative school contexts suggests that staff prioritise emotional or relational ways of being an educator and often experience a necessary shift from 'task-orientation' to 'people-orientation', and from 'doing' to 'being and understanding', in order to effectively to support the young people's engagement with learning (Morgan, 2013; Morgan et al., 2013). The emotional work of teachers who work with 'at-risk' students is particularly important and can make a positive impact on the lives of young people who may have suffered from abuse or mistreatment (Morgan et al., 2013). A recent national report (te Riele, 2012) reinforced the need for professional development of staff who have been described as the 'greatest asset' of alternative

learning programs (te Riele, 2014). Professional development innovations such as the mindfulness intervention implemented as part of the current study are needed to support the emotional work of teachers in alternative schools.

2.3.5 The issue of staff retention in alternative education

One of the central themes echoed in the research is the difficulty of finding and retaining quality staff for alternative schools, as well as the related issue of supporting staff through professional development (Lehr et al., 2004; Lehr & Lange, 2003; te Riele, 2012). Figures relating to staff retention in Australian alternative schools are difficult to source; a limited sample suggests that the average turnover of Australian alternative school teachers occurs within five years of employment (Morgan, 2013), which is in line with figures for the general teaching population (Gallant & Riley, 2014). These figures find support in recent US statistics which suggest that approximately 50% of teachers from ‘high-risk’ schools transfer or resign within the first five years of employment (Morgan & Kritsonis, 2008).

‘High-risk’ schools (defined as schools with a difficult teaching environment, often featuring a high proportion of socio-economically disadvantaged students and low academic achievement; Morgan & Kritsonis, 2008) may be distinct from alternative schools but similarities exist in terms of the demanding and stressful nature of the work which impacts on the long-term viability of staff (Mills & McGregor, 2010). International research suggests that schools serving low-income students or students with emotional and behavioural difficulties struggle to attract and retain teachers (Cancio & Conderman, 2008; Clark, McConnell, Constantine, Chiang, & NCEERA, 2013). The American Association for Employment in Education reported higher attrition rates for teachers of emotionally and behaviourally challenging students, with a disproportionate national shortage in comparison to teachers at conventional schools over a ten-year period (Cancio & Conderman, 2008; Swars, Meyers, Mays, & Lack, 2009).

This critical shortage has been attributed to stress deriving from a range of individual and organisational characteristics, including student-related factors such as academic and social skills deficits, complex psychological needs, emotional and behavioural disorders and poor coping strategies (Cancio & Conderman, 2008; Swars et al., 2009). Moreover, not only do the complex needs of students contribute to the demanding nature of the work required of staff, but alternative schools tend to

employ fewer teachers on site, meaning that teachers potentially need to be skilled across a range of subject areas, with expertise in both regular and special education (Lehr & Lange, 2003). These issues specific to the context of alternative schools clearly increase the challenge of finding and retaining quality staff.

2.3.6 The need for staff support in alternative education

The challenge involved in finding and retaining quality staff has significant implications for schools as it contributes to organisational instability (Ingersoll & Smith, 2003); arguably, these implications are compounded in the alternative school context which relies so heavily on teacher-student relationships for successful student outcomes (McGregor & Mills, 2012; Mills & McGregor, 2010; Morgan, 2013). The retention of experienced staff is critical to the relational foundation of alternative education programs. Recommendations made in the USA national teacher survey data (Berry & CTQ, 2007) stressed that, in order to retain teachers, they need to be provided with support for the specific challenges posed by working with students with complex needs. This is a thread which runs through the literature on the topic, both internationally and nationally; that is, professional development and support are required to assist with the emotionally complex and demanding workloads of staff in alternative schools (Lehr et al., 2004, te Riele, 2012). The focus on providing professional development as support for the emotional work of staff employed in alternative schools is the impetus for this study.

In order to support the emotionally demanding work of teachers, it is important to recognise both the range of emotions experienced by teachers and their ability to regulate these emotions. Research is beginning to address how teachers' emotion regulation abilities may either contribute to or prevent stress and burnout (Fried et al., 2015; Jennings & Greenberg, 2009; Tsouloupas et al., 2010). The current study extends this research by exploring the relationship between mindfulness, teacher stress, emotional exhaustion and emotion regulation. The following section introduces the theoretical framework of this study which focuses on emotion regulation ability as critical to the emotional work of teachers.

2.4 THEORETICAL FRAMEWORK

2.4.1 Teacher emotion regulation

Emotion regulation refers to the ways in which we attempt to control and redirect the emotions we experience (Gross, 2002). As such, emotion regulation ability can be used to up-regulate positive emotions or down-regulate negative emotions in order to reach a desired emotional state.

Effective emotion regulation ability is essential to protect against the emotional demands of teaching, including the concomitant risk of stress and burnout (Brackett et al., 2010). Teachers with greater capacity to regulate emotion are better prepared to deal with the demands of teaching (Hosotani & Imai-Matsumura, 2011). Similarly, effective emotion regulation ability has been positively correlated with job satisfaction and positive affect (Brackett et al., 2010). Conversely, teachers with inadequate emotion regulation skills may face situations which they are unable to negotiate, resulting in possible deterioration of classroom climate and other aspects of their professional role. Over an extended time period, this may lead to stress and emotional exhaustion, ultimately resulting in burnout (Jennings & Greenberg, 2009). It should be noted that mixed results have been observed as to the role of emotion regulation in protecting against burnout in previous quantitative research (e.g. Brackett et al., 2010) which suggests that further research is required in this area (these results are discussed in more detail in section 2.5.2). However, given the emotional content of teachers' work, it logically follows that effective emotion regulation skills may support the emotional work of teachers. Therefore, material related to development of these skills is appropriate content for innovative teacher professional development programs.

In order to develop this support for teachers, an understanding of the process of emotion regulation is necessary. The following section offers an explanation of the process of emotion regulation as articulated in two related theoretical models developed by James Gross, the modal model of emotion generation and the process model of emotion regulation (Gross, 1998b; Gross, 2008; Gross, 2015).

2.4.2 The modal model of emotion generation

The modal model of emotion (Gross, 2008; Gross, 2015) describes the ways in which emotions are generated. As discussed in section 1.3.1, emotions can be

defined as episodic affective states, either positive or negative, which are evoked as a result of specific events, and which give rise to changes in terms of subjective experience, behaviour and physiology (Gross, 2015; Mulligan & Scherer, 2012). According to the modal model, as illustrated in Figure 2.1 below, emotion generation operates as a cycle. This cycle begins with a *situation* to which *attention* is directed; this attention then affords an *appraisal* of the situation which results in a reaction or *response*, which may be either adaptive or maladaptive. This model highlights the temporal quality of emotions, as the emotional response feeds back into the situation, creating change over time.

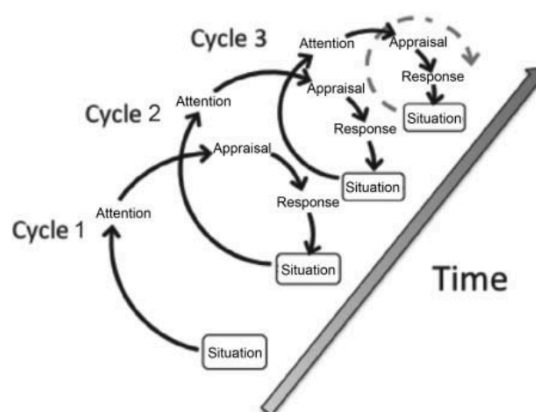


Figure 2.1 The modal model of emotion. Reprinted from *Emotion Regulation: Current Status and Future Prospects*, by J. J. Gross, 2015, retrieved from <http://www.tandfonline.com/doi/abs/10.1080/1047840X.2014.940781>. Copyright 2015 by J. J. Gross.

2.4.3 The process model of emotion regulation

The modal model informs the process model of emotion regulation (Gross, 1998b; Gross, 2008; Gross, 2015), which the current study draws heavily upon for its theoretical framework. To recap, emotion regulation encompasses the ways in which we attempt to influence our emotions and our subsequent experience of those emotions (Gross, 2002). These processes can take place in a range of ways. As such, the process model proposes a number of emotion regulation strategies that occur at different points along the modal model cycle of emotion generation (see Figure 2.2).

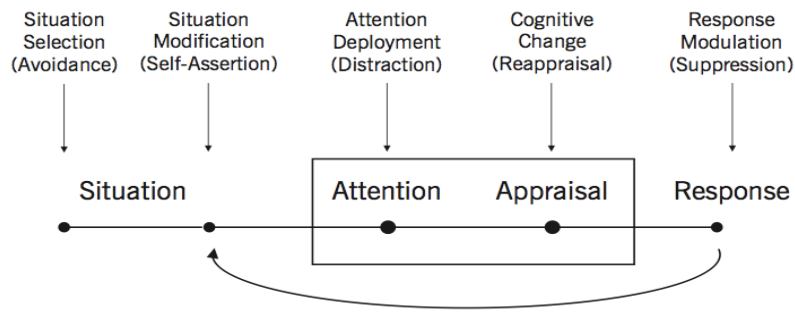


Figure 2.2 Cycle of emotion regulation strategies. Reprinted from *Emotion Regulation: Current Status and Future Prospects*, by J. J. Gross, 2015, retrieved from <http://www.tandfonline.com/doi/abs/10.1080/1047840X.2014.940781>. Copyright 2015 by J. J. Gross.

As Figure 2.2 illustrates, opportunities to regulate emotion arise at the following stages in the cycle:

1. *Situation selection*: This is the first and most proactive of the emotion regulation strategies. It refers to the selection of one's situation in order to minimise the likely occurrence of unpleasant emotions or, conversely, to maximise the likelihood of pleasant emotions. In the context of a school situation, this could involve avoiding a colleague with whom one expects confrontation.
2. The next opportunity for emotion regulation is *situation modification*. This strategy involves modifying a situation to adjust its potential emotional impact; for example, a teacher could arrange students in groups so as to limit social interaction or to encourage peer tutoring.
3. *Attention deployment*, the next opportunity for emotion regulation, involves deliberately focusing one's attention in a particular direction in order to regulate one's emotional response. This could take place, in the case of a classroom teacher, by momentarily directing one's attention away from an emotionally challenging student.
4. The next stage, *cognitive change*, requires an adjustment of one's evaluation of a situation so as to transform its emotional significance; for example, a teacher could respond to an internal state of anxiety about an upcoming lesson by engaging in positive self-talk that she or he is capable of managing that class.

5. Finally, the opportunity for *response modulation* arises after an emotion has already evolved, and consists of taking steps to adjust experiential, behavioural or physiological aspects of an emotional response to minimise its impact, for example, by suppressing the behavioural expression of frustration while teaching a challenging class.

2.4.4 Emotion regulation – the importance of timing

There is empirical evidence that the *earlier* one regulates emotion, the more positive benefits ensue in terms of physical, cognitive, and social and emotional consequences (e.g. Tsouloupas et al., 2010). Thus, the timing of emotion regulation is critical to its consequences. The process model distinguishes between *antecedent-focused emotion regulation* and *response-focused emotion regulation* (or response modulation). Antecedent-focused regulation takes place during the generation of an emotion and includes situation selection and modification, attention deployment, and cognitive change. In contrast, response modulation takes place subsequent to the experience of an emotion (see Figure 2.2) (Gross & John, 2003).

The following section examines the different consequences which appear to arise from emotion regulation strategies which occur at different stages of emotion regulation: *cognitive change* or *reappraisal* (an antecedent-focused strategy which occurs at the point of appraisal in the modal model) and *suppression* (which occurs at the subsequent point of response).

Antecedent-focused emotion regulation – cognitive change or reappraisal

Cognitive change is a means of modifying one's appraisal of a situation while an emotion is being generated. This could take place in a myriad of ways, including reappraisal of the personal impact of a situation. Research suggests that emotions arise in response to perceptions of events rather than from the intrinsic nature of events themselves (Friedman, 1995; Lazarus, 2007; Roseman & Smith, 2001; Woolfolk Hoy, Davis & Pape, 2006). Therefore, if the nature of an event can be re-interpreted, the emotional response to the event can also be altered; for example, a teacher may reappraise the significance of a conflict with a student by reflecting upon the quality of positive interactions she or he has with other students, thereby putting the conflict in perspective.

Reappraisal is associated with a reduction of negative emotion, benefits to psychological health, improved inter-personal functioning, and, potentially, improved memory (Gross, 2015; John & Eng, 2013). It is negatively correlated with teacher emotional exhaustion (Tsouloupas et al., 2010) and is generally regarded as an effective regulation strategy (Folkman & Moskowitz, 2000; Tugade & Frederickson, 2007; Yamasaki, Sakai, & Uchida, 2006).

Response-focused emotion regulation – suppression

In contrast, suppression is a form of response modulation which occurs later in the emotion regulation cycle. Suppression requires a high degree of emotional work and generally involves hiding one's true emotions; for example, a teacher who has been upset by the actions of a student may hide his or her feelings in order to be able to continue to teach the class. Suppression has been associated with decreased positive emotion, decreased wellbeing, degraded memory, and less satisfying social relationships (Gross, 2015; John & Eng, 2013). Suppression has been positively correlated with teacher stress and burnout (Tsouloupas et al., 2010).

Implications of timing for mindfulness

The examples given above demonstrate the critical importance of the timing of emotion regulation in terms of physical, cognitive, social and emotional outcomes. Cognitive reappraisal and suppression are the emotion regulation strategies which have been given the most attention to date (Gross, 1998a; Gross & John, 2003). However, since research indicates that more positive consequences ensue the earlier one regulates emotion, it follows that an emotion regulation strategy which operates even earlier in the cycle, at the point of *attention deployment*, or even earlier, at the point of *situation selection* or *situation modification*, could have even greater beneficial consequences (Farb et al., 2013).

Gross (2015) refers to distraction, or directing attention *away from* emotionally distressing situations, as an example of adaptive attention deployment. However, mindfulness involves bringing attention *to* the emotionally distressing stimulus. Research suggests that a mindful approach is a more productive form of attention deployment than avoidance (Holzel et al., 2011). A recent adaptation of the process model of emotion regulation incorporates mindfulness at the point of attention deployment (Farb et al., 2013) (see Figure 2.3 below). Adopting a provisional definition of mindfulness as *paying attention* to present moment experience (Bishop

et al., 2004; Kabat-Zinn, 1990), this appears to be a logical fit. As such, it is posited that mindfulness can play a role in more adaptive emotion regulation at the point of attention deployment. Attention deployment occurs earlier in the process of emotion regulation than both cognitive change and response modulation, and may therefore result in more beneficial outcomes than either of those strategies.

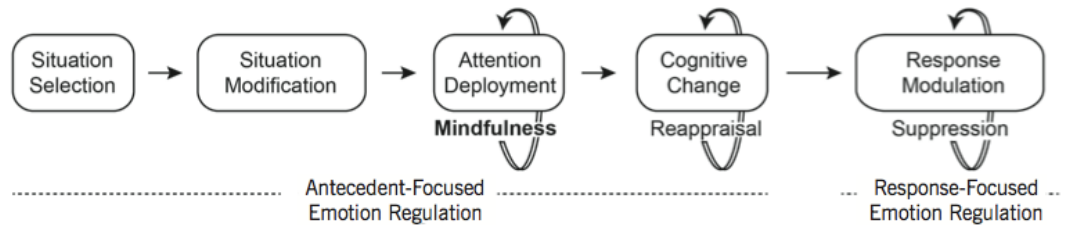


Figure 2.3 A process model account of mindful emotion regulation. Reprinted from *Mindfulness Interventions and Emotion Regulation*, by Farb et al., 2013. Copyright 2013 by J. J. Gross.

However, it is suggested that this model could be extended further as, by its very nature, present moment awareness should be able to play a role at each stage of the process model. Thus, present moment awareness could also be used to inform and enhance even the earliest stages of emotion regulation - *situation selection* and *situation modification* – as depicted in figure 2.4.

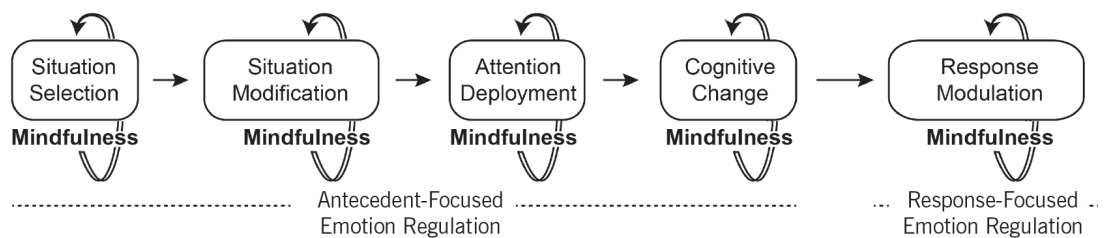


Figure 2.4 A process model account of mindful emotion regulation. Adapted from *Mindfulness Interventions and Emotion Regulation*, by Farb et al., 2013. Copyright 2013 by J. J. Gross.

The adapted version of the process model of emotion regulation, which posits a role for mindfulness, will be elaborated upon in section 2.4.6 below. However, in order to understand how mindfulness can be incorporated into this model, it is first necessary to propose an operational definition of mindfulness.

2.4.5 Mindfulness

Towards a definition

The term “mindfulness” is currently gaining traction in mainstream society and is an emerging topic of interest in various fields of research (e.g. Baer, 2003; Davidson, Kabat-Zinn & Schumacher, 2003; Frank, Reibel, Broderick, Cantrell & Metz, 2015). However, current research focuses largely on the results of mindfulness practices, rather than on defining mindfulness (Brown & Ryan, 2003). A more thorough discussion of research into the benefits of mindfulness for teachers is provided in Section 2.5. While these benefits appear to be promising, defining ‘mindfulness’ is problematic (Chiesa, 2013). This partly derives from the fact that writing about mindfulness is somewhat antithetical because of the subjective and experiential nature of mindfulness (Shapiro & Carlson, 2009). Despite the problematic nature of defining mindfulness, a number of authors have attempted to address this problem, resulting in a range of alternative conceptualisations of this somewhat elusive construct.

Classical definitions

Mindfulness derives from Buddhist roots, but also figures in many philosophical and spiritual frameworks, such as existentialism, phenomenology, humanism and transcendentalism, suggesting that it is central to the experience of being human (Brown et al., 2007). The term itself is a translation of the Pali word ‘sati’ which means ‘memory’. In this sense, ‘memory’ can be described as “presence of mind, attentiveness to the present, rather than the faculty of memory regarding the past” (Bodhi, 2000, p. 86). Bikkhu Bodhi, a Theravadin monk and scholar, defines mindfulness as both a process and an outcome in which one “remember(s) to pay attention to what is occurring in one’s immediate experience with care and discernment” (Wallace & Bodhi, 2006, p. 12).

Clinical Definitions

A one-dimensional model - ‘bare awareness’

Although mindfulness has a long history in Buddhist traditions, mainstream Western interest in mindfulness dates back to just the late twentieth century (e.g. Kabat-Zinn, 1982). The rise of Western interest in mindfulness is evident in clinical, scientific, psychological, corporate and educational sectors of contemporary society (Baer, 2003; Jennings, Lantieri & Roeser, 2012). Despite this interest, there is

disparity between different authors' conceptualisations of mindfulness (Chiesa, 2013). The notion of *bare awareness* or attention is often discussed in relation to mindfulness and involves being aware of one's present moment experience (Shapiro & Carlson, 2009). 'Bare awareness' is often practised through meditation techniques where one's attention is focused on an anchor to present moment experience, such as the breath. However, there is more to mindfulness than purely meditative practices. Mindfulness involves being aware of one's present moment experience, and meditation is, indeed, a form of mindfulness, but mindfulness could also be described as a 'state of consciousness' which goes beyond the practise of meditation into the realm of the everyday (Kabat-Zinn, 1990). As such, mindfulness is the awareness of one's subjective experience at the moment of engagement in that experience, for example, while one is breathing or doing the dishes (Nhat Hahn, 1975).

However, an explanation of mindfulness as 'bare awareness' is one-dimensional, and may misrepresent classical meanings of mindfulness (Grossman, 2008). Indeed, some critics suggest that the adoption of mindfulness by the Western scientific and clinical community – the so-called 'medicalisation of mindfulness' (Harrington & Dunne, 2015) – results in a degradation and distortion of rich Buddhist cultural traditions (e.g. Wallace, 2006). No doubt, a cross-cultural process of selective interpretation and distillation of key Buddhist concepts has resulted in a privileging of certain concepts over others which may have practical consequences for mindfulness-based interventions in secular contexts (Harrington & Dunne, 2016). The classical Buddhist version of mindfulness emphasises an ongoing engagement with ethical evaluation of one's purpose in life (Harrington & Dunne, 2016). Thus, secular mindfulness interventions based on a definition of mindfulness as 'bare awareness' alone may be vulnerable to ethical critique (Harrington & Dunne, 2015).

A three-dimensional model

In order to address possible misrepresentations of the traditional meaning of mindfulness, Shapiro and colleagues (2006) suggest a three-dimensional model, consisting of *attention*, *intention* and *attitude*.

1. In this model, *attention* consists of a deep observation of both internal and external experience; the experiential practice of mindfulness is elucidated in this model by reference to Husserl's description of "a return to things themselves" (cited in Shapiro & Carlson, 2009, p. 10).

2. *Intention* also forms part of this explanation of mindfulness. Intention is used in a light, dynamic and evolving sense and is held by the practitioner of mindfulness in a non-striving manner.
3. Finally, this model introduces the notion of *attitude* as fundamental to a practice of mindfulness - an attitude of non-reactive, discerning, sustained attention. The incorporation of attitude in the model is justified by reference to Buddhist traditions, noting that the Chinese characters for mindfulness consist of two ideograms representing presence and heart. In some Asian languages, heart and mind are the same word, leading some to use the term ‘heart-mindfulness’ instead of ‘mindfulness’ (Shapiro et al., 2006, p. 376).

Alternative models

The central importance of attitude, which could also be described as ‘non-judgmental acceptance’, is recognised by a number of other authors in the field. Jon Kabat-Zinn, a key researcher in the field, refers to ‘open-hearted’ attention (Kabat-Zinn, 2015) and defines mindfulness as “the awareness that arises by paying attention on purpose, in the present moment, and non-judgmentally” (1990, p. xxxv). Likewise, Bishop and colleagues (2004) present a two component model combining self-regulated attention with a quality of curiosity, openness and acceptance. In contrast, other authors claim that non-judgmental acceptance is not an inherent quality of mindfulness but, rather, may be used to bring about, and simultaneously be the outcome of mindfulness (e.g. Chiesa, 2013; Mikulas, 2011).

Drawing upon key authors in the field (e.g. Bishop et al., 2004; Kabat-Zinn, 1990; Shapiro & Carlson, 2009), this study adopts a definition of mindfulness which has the qualities which recur most consistently in the literature: *present moment attention* and *non-judgmental awareness*. This definition derives from secular research which focuses on basic forms of mindfulness practice, rather than being deeply embedded in complex Buddhist traditions. It is argued that such an approach plays a role in presenting mindfulness as a legitimate and evidence-based tool for promoting well-being within secular contexts (Kabat-Zinn, 2011).

Having arrived at a provisional definition, the following section provides an overview of the underlying mechanisms of mindfulness which appear to relate to

emotion regulation ability and which have been suggested to contribute to the potential benefits of mindfulness.

2.4.6 Emotion regulation and the mechanisms of mindfulness

An understanding of how mindfulness generates its apparently beneficial effects is still in development (Holzel et al., 2011). However, if we accept that a key goal of mindfulness is the maintenance of non-judgmental attention to both inner and outer aspects of present-moment experience, it is possible to discern a number of factors at play:

- attention regulation (Brown & Ryan, 2003; Holzel et al., 2011; Shapiro et al., 2006);
- interoception or body awareness (Brown et al., 2007; Holzel et al., 2011);
- emotion regulation (Farb et al., 2013; Holzel et al., 2011); and
- an attitude of detachment or “de-centering” of experience in relation to the self (Holzel et al., 2011; Fresco et al., 2007).

Research suggests that these processes may assist in activating adaptive emotion regulation strategies when an individual is placed under stress by allowing intentional and strategic responses to stressful stimuli. The following explanation, adapted from Holzel et al. (2011), may assist in clarifying how these factors – attention, interoception, emotion regulation and detachment - interact to create an adaptive response to an unpleasant emotional experience, such as anxiety or stress. In this way, the connection between mindfulness and the antecedent-focused emotion regulation strategies which form the theoretical framework of this study, will become evident.

A mindful approach to an unpleasant emotional experience initially arises as a result of active *attention regulation*. Attention regulation assists in producing a mindful response to the situation in a number of ways: first, the executive attention system plays a role in appraising the situation by detecting a conflict (a state of anxiety or stress) to the over-riding goal of maintaining a mindful state. By maintaining focus on present-moment experience with an attitude of non-judgment, attention regulation also reduces ruminative thought or anxious thought patterns

(Holzel et al., 2011). By reducing ruminative thought, executive function is diverted away from these concerns, thus allowing executive resources to engage in more flexible and adaptive approaches to the stressor (Skinner & Beers, 2016, p. 110). Attention regulation also assists in providing continual access to information about one's internal and external present-moment experience as it unfolds. This information can then be used to inform an adaptive response to the situation.

Heightened *body awareness* also provides information about one's present moment experience (Holzel et al., 2011). Body awareness assists in appraisal of the stressor by allowing early detection of physiological symptoms (such as shoulder tension) which can then be used to accurately identify the associated emotional state (anxiety or stress). In a recent study, heightened body awareness (or interoception) was correlated with more effective emotion regulation (Fustos, Gramann, Herbert & Pollatos, 2013). Body awareness is one of the key outcomes of mindfulness and is cultivated through many mindfulness practices. An awareness of both physiological and emotional changes enables earlier *identification* of emotion and is, thus, central to effective emotion regulation.

Emotion regulation processes of non-reactivity and exposure also come into play, enabling a transition away from maladaptive patterns of reactivity towards more adaptive emotional responses (Holzel et al., 2011). By cultivating *non-judgmental attention*, or a state of *non-reactivity* to inner experience, mindfulness may enhance the capacity to over-ride habitual reactive behavioural and emotional tendencies (thereby decreasing under-regulation of emotion). Moreover, by encouraging attentional focus and thereby increasing *exposure* to stimuli, mindfulness may decrease aversion to negative emotions, and, by association, may also reduce over-regulation of emotions which takes place through suppression of 'unacceptable' behavioural reactions. Parallels can be drawn between this process and therapeutic processes which are used to reduce fear and anxiety responses through exposure to fear or anxiety-provoking stimuli (Holzel et al., 2011).

Finally, an attitude of *detachment* facilitates adaptive emotion regulation by assisting one to draw a distinction between the 'field of awareness' and the 'contents of experience' (Skinner & Beers, 2016, p. 110). This detachment is a kind of meta-awareness, allowing a separation between self and experience, which reduces the tendency towards self-referential processing. This ultimately decreases the

significance of the stressor to oneself. The process of detachment, or de-centering, seems to create a space between stimulus and response, allowing for more conscious and intentional regulation of action (Holzel et al., 2011). The conscious selection of emotion regulation strategies may, in fact, include even the most antecedent emotion regulation strategies - situation selection and situation modification (see Figure 2.2; Gross, 2015). Thus, mindfulness can play a role in encouraging the use of emotion regulation strategies which, theoretically, have the most beneficial physiological, cognitive, social and emotional consequences.

As discussed above, these four factors – attention, body awareness, emotion regulation and detachment - serve to illuminate at least some of the processes underlying the potentially beneficial effects of mindfulness. According to the process model of mindful emotion regulation (see Figure 2.3; Farb et al., 2013), mindfulness may be activated at the point of attention deployment (or even earlier, at the point of situation selection or modification) to cultivate adaptive antecedent-focused emotion regulation. The adapted model prioritises the role played by attention regulation. However, the four factors identified above appear to be highly inter-related; in fact, the distinctions between them are somewhat artificial (Holzel et al., 2011). Thus, attention regulation is fundamental to the processes of both body awareness and detachment, which, in turn, are related to, and not distinct from, the process of emotion regulation. At this stage, then, the theoretical model is still being developed. The suggested components of the model require further exploration in order to determine their agency and to more fully integrate them into a comprehensive model (Fried et al., 2015; Holzel et al., 2011). This theoretical model does, however, inform the research design by suggesting that there may be a connection between mindfulness, emotion regulation and work-related stress for teachers. As outlined in the methodology section, below, this study has collected data related to mindfulness, stress and emotion regulation, to create a deeper understanding of how mindfulness impacts upon teacher stress and emotion regulation ability.

2.5 INTERVENTIONS TO SUPPORT THE EMOTIONAL WORK OF TEACHERS

A range of teacher interventions have been developed in recent years around the notion of positive psychology, emotional intelligence, and social and emotional competence (Jennings & Greenberg, 2009). These include the *Emotionally Intelligent*

Classroom (Brackett & Katulak, 2006) which trains teachers in recognising and regulating emotions in response to common classroom situations, *Courage to Teach* (Palmer, 1998) which assists teachers in developing more compassionate relationships with students and co-workers, and the *Inner Resilience Program* (Lantieri, Nambiar, & Chavez-Reilly, 2006) which provides teachers and students with strategies to strengthen resilience. Some of these programs have resulted in promising outcomes, but research focuses primarily on student outcomes rather than teacher outcomes (e.g. Jennings & Greenberg, 2009; Shankland & Rosset, 2016).

Given the great need to offset the problem of educator stress and burnout, investigation is required to further our understanding of the most appropriate school-based interventions to support the emotional work of teachers and to create positive impacts on educator well-being (Harris, Jennings, Katz, Abenavoli & Greenberg, 2016). In terms of providing this support, a number of key authors in the field specifically suggest mindfulness as a strategy for addressing stress and emotional exhaustion (e.g. Jennings & Greenberg, 2009; Jennings, Lantieri & Roeser, 2012; Leiter & Maslach, 2014). Section 2.5.1 will discuss the structure and use of mindfulness interventions in detail.

2.5.1 Mindfulness interventions

Interventions based on mindfulness training are becoming increasingly popular in a range of contexts, from clinical to corporate and educational settings. Many of the existing mindfulness interventions, including teacher-based interventions, are based upon mindfulness-based stress reduction (MBSR), a program developed in the 1970s by Jon Kabat-Zinn (1982) to assist patients suffering from pain and stress-related conditions.

Since the inception of MBSR, there has been increasing evidence that mindfulness interventions have wide-ranging physical, mental and emotional benefits in both clinical and non-clinical samples (Brown et al., 2007; Grossman et al., 2004; Kabat-Zinn et al., 1992). Promising early results understandably led to interest in conducting further research into the possible benefits of mindfulness across wide-ranging fields of research. Amongst the emergent research are a number of neuroscientific brain imaging studies. These studies suggest that mindfulness alters the structure and function of the brain, reshaping neural pathways and increasing the density of connections in areas of the brain associated with attention, awareness,

compassion and rationality, while decreasing pathways associated with anxiety and impulsivity (Davidson and Lutz, 2008; Holzel et al., 2011). On the basis of these results, MBSR-style interventions have proliferated, with one estimate suggesting that more than 240 hospitals and clinics worldwide offer mindfulness-based stress reduction training (Baer, 2003).

The standard format of the eight week MBSR course is delivered in a weekly 2.5 hour group session. Each session incorporates instruction and practise of mindfulness skills, together with group discussions of participant experiences. A full day of silent mindfulness practices is generally offered between weeks six and seven of the program. Participants are also expected to adopt a daily home practice of mindfulness for approximately 45 minutes per day.

The MBSR program teaches participants a variety of *formal* mindfulness practices which are analogous to contemplative or meditative practices - such as body scans, breath awareness and mindful yoga - and *informal* mindfulness practices which are associated with everyday activities - such as mindful eating. Formal and informal practices are intended to reinforce each other. Formal practice cultivates the ability to practise mindfulness in everyday life, while informal practice is meant to generalise what is learned in formal practice to everyday life (Kabat-Zinn, 2003). There is increasing evidence that these mindfulness practices result in a variety of physical, mental and emotional benefits, which are discussed in section 2.5.2.

As mentioned above, the MBSR course is, perhaps, the most recognised mindfulness-based intervention. However, due to the specific requirements of educational contexts, a range of manualised mindfulness courses specifically for teachers have begun to emerge (e.g. Mindfulness in Schools Project, Mindful Schools, Mind with Heart). These courses often place differing degrees of emphasis on various course components, including the relative importance of formal and informal mindfulness practices.

In a recent study, Hindman, Glass, Arnkoff and Maron (2015) compared the outcomes of a stress management program that used both formal and informal practices (Mindful Stress Management; MSM) to one that had a greater emphasis on informal practices with brief mindfulness exercises (Mindful Stress Management – Informal; MSM-I). Both interventions were found to reduce stress, depression and rumination for study participants although the results from the MSM program

surpassed those of the MSM-I. The researchers hypothesised that regular formal meditation may have greater impact because of its more structured approach to cultivating mindfulness. A significant limitation of this research, however, was the fact that MSM participants did not keep a record of daily informal mindfulness practices so information was not available as to how informal practice related to outcomes.

Another recent study (Sauer-Zavala, Walsh, Eisenlohr-Moul, & Lykins, 2013) looked at the differences in outcomes resulting from a range of mindfulness practices. This study found that mindful yoga resulted in the greatest increases in psychological well-being; seated meditation and mindful yoga were linked with greater improvements in emotion regulation than the body scan; and seated meditation resulted in more non-judgmental awareness than the body scan. The primary shortcoming of this study was the brief duration of the mindfulness training provided, which was limited to three one-hour sessions. Despite this limitation, the study's findings pointed towards differences in outcomes from various mindfulness practices and suggested the need for further research in this area.

Both formal and informal mindfulness practices appear to have beneficial outcomes, which are discussed in the following section, but determining the practices from which these benefits derive is problematic without further research. This clearly impacts upon customisation of mindfulness programs for teachers, as discussed below.

2.5.2 Benefits of mindfulness interventions in education

Mindfulness is being used with increasing frequency in educational settings. While most of the education-based research has centred around the potential benefits to students (Albrecht, Albrecht & Cohen, 2012; Meiklejohn et al., 2010; Weare, 2014), a recent report recorded 27 US mindfulness-based programs that include teachers as an intervention group (Garrison Institute, 2014). Promising results are beginning to emerge which indicate that mindfulness is associated with beneficial effects for teachers across psychological, physical, emotional and behavioural realms (e.g. Bernay, 2014; Jennings, Frank, Snowberg, Coccia & Greenberg, 2013). The following section provides an overview of the benefits which have been attributed to teacher-based mindfulness interventions.

The benefits of mindfulness for teachers - an overview

The research into teacher-based mindfulness interventions extends back to the late 1990s (e.g. Winzelburg & Luskin, 1999; Anderson, Levinson, Barker, & Kiewra, 1999). During this period, mindfulness has increasingly been associated with a range of indicators which have either a direct or indirect relationship to the emotional well-being of teachers (Lomas et al., 2017; Weare, 2014). The general pattern emerging from the research reveals beneficial outcomes as a result of mindfulness practice in relation to educator mindfulness, stress, emotional exhaustion, emotion regulation and general well-being (Lomas et al., 2017; Weare, 2014).

A number of studies have found that mindfulness practice can result in a general sense of enhanced personal well-being for teachers, which includes a greater capacity to relax (Campion & Rocco, 2009), improved sleep patterns (Frank et al., 2015), enhanced physical health (Jennings et al., 2013) and overall life satisfaction (Poulin, 2009). More specifically, a number of studies have found a correlation between increased levels of mindfulness, brought about as a result of mindfulness practice, and reductions in clinical measurements of psychological stress (Gold et al., 2010; Roeser et al., 2013; Winzelburg & Luskin, 1999), anxiety (Flook, Goldberg, Pinger, Bonus, Davidson, 2013; Poulin, 2009; Roeser et al., 2013), and burnout (Anderson et al., 1999; Flook et al., 2013; Jennings et al., 2013; Roeser et al., 2013).

These findings are supported by results which indicate that mindfulness interventions can lead to improvements in factors which are hypothesised to play a protective role in managing teacher stress, anxiety and burnout. These factors include increased resilience (Bernay, 2014), a reduced sense of time pressure (Jennings, Snowberg, Coccia & Greenberg, 2011; Jennings et al., 2013), improved teacher self-efficacy (Jennings et al., 2013; Poulin, 2009) and occupational self-compassion (Frank et al., 2015; Roeser et al., 2013). These results are also reinforced by findings into cognitive outcomes, such as greater focus and working memory capacity (Bernay, 2014; Roeser et al., 2013), which can be associated with reduced levels of stress, anxiety, and burnout.

Positive results are apparent in both the quantitative and qualitative data, as evident in participant observations of an increasing awareness of the relationship between physiological and psychological indicators of stress (Schussler, Jennings, Sharp & Frank, 2016). Yet the positive trends are not consistent, with some studies

reporting null or mixed results in relation to the use of mindfulness to manage teacher stress and emotional exhaustion (Frank et al., 2015; Gold et al., 2010; Harris et al., 2015; Jennings et al., 2011; Jennings et al., 2013; Poulin, 2009). Variations in participant samples, such as low baseline levels of emotional exhaustion (Jennings et al., 2013), have been hypothesised to account for unexpected results. However, while inconsistent results persist, further research to clarify the impact of mindfulness interventions on stress, emotional exhaustion and overall teacher well-being, is warranted.

The pattern of results related to improved teacher well-being is supported by findings that mindfulness is associated with increases in social and emotional well-being. Previous studies have found that teachers participating in mindfulness interventions observe positive effects on their attitudes and behaviours towards themselves and others (Singh, Lancioni, Winton, Karazsia & Singh, 2013; Soloway, 2011). These observations have led researchers to conclude that mindfulness can result in an increased ability to maintain healthy relationships (Bernay, 2014; Meiklejohn et al., 2010; Singh et al., 2013).

In relation to social and emotional outcomes, a number of themes emerge from the research, including an increase in present-centred emotional awareness and an increased ability to modulate emotional reactivity (Sharp & Jennings, 2016). These themes suggest that mindfulness interventions can result in improvements in emotion regulation ability. Some studies have found statistically significant improvements in quantitative measures of participant emotion regulation ability (Jennings et al., 2013) which researchers attribute to the use of mindfulness in challenging emotional situations. Qualitative data appears to support these results, with a recent longitudinal study (Sharp & Jennings, 2016) finding that participants seemed to be engaged in a constant process of reflexivity. Reflexivity is characteristic of reappraisal, one of the emotion regulation strategies identified in the process model of emotion regulation (Gross, 2015). Participants in this study also commented upon perceived increases in compassion, self-regulation and reappraisal as positively affecting interactions with students. Interestingly, in a number of studies, beneficial outcomes were not limited to interactions with students, but appeared to transfer across to close personal relationships (e.g. Crain, Schonert-Reichl & Roeser, 2016; Singh et al., 2013). This spill-over effect into the personal lives of teachers appears to create a compounding

effect of the beneficial impact of mindfulness training on overall teacher well-being. These findings suggest that mindfulness interventions have the potential to support the emotional work of teachers, and also imply that beneficial outcomes in terms of teacher well-being may extend beyond the workplace.

While the results of the studies outlined above are promising, the research suffers from a range of limitations. Many of the quantitative studies are quasi-experimental in design and are based on small sample sizes (e.g. Gold et al., 2010; Flook et al., 2013). Moreover, the teacher interventions which have been studied vary considerably in terms of format, ranging from four weeks (Jennings et al., 2011) to three years (Bernay, 2014), raising questions as to intervention fidelity. These studies are therefore limited in terms of generalisability and statistical significance which makes it difficult to draw conclusions as to causality. Moreover, inconsistent statistical results have been found in a number of the quantitative studies into the use of mindfulness with teacher populations (e.g. Frank et al., 2015; Roeser et al., 2013). These results may be due to sample size constraints which are understandable in the context of conducting preliminary research in educational settings. In addition, most participant samples consist exclusively of volunteers which raises questions as to the type of participant who is attracted to these interventions and, thus, limits the generalisability of conclusions which can be drawn.

Another limitation inherent in the research is the overwhelming use of self-report measures which may be prone to subjective bias (“Social Desirability Bias”, 2005). This may be compounded in the case of mindfulness research due to the influence of ‘reference bias’ (Huppert & Johnson, 2010) which may create inaccurate results as participants become more aware, for example, of indicators of stress, emotional exhaustion and mindfulness, as their levels of self-awareness also increase (e.g. Winzelburg & Luskin, 1999). There are also specific issues related to the quantitative measurement of mindfulness which arise from inconsistencies in defining mindfulness as a construct. These issues are discussed in more detail in the methodology section of this proposal.

As a result of these limitations, there has been a consistent call in the literature for more rigorous methodology, including the use of objective observable measures of teacher well-being, student and classroom outcomes (Flook et al., 2013; Frank et al., 2015; Jennings et al., 2013; Lomas et al., 2017; Singh et al., 2013). Certainly, in

the last few years, mindfulness research has attempted to attain a higher standard of methodological rigour (Flook et al., 2013; Roeser et al., 2013). However, without access to a large randomly selected sample from the target population and a combination of both objective and subjective measures, the statistical power of any mindfulness intervention study will be limited.

The acknowledgement that there are limitations in the quantitative research into mindfulness and teachers is not intended to understate the positive trends of these results in general. Given the logistical constraints involved in conducting pilot research within a school context, these limitations are understandable and do not prevent these studies from contributing to the growing research into mindfulness interventions. However, while the research is still in its exploratory stages, qualitative and anecdotal evidence can assist in communicating the subjective experiences of study participants and, thereby, substantiate the need for further quantitative research. Indeed, the qualitative components of the existing research are revealing, with teacher-participants in mindfulness interventions generally reporting positive experiences and immediate benefits overall (Beshai et al., 2016; Napoli, 2004; Poulin, 2009; Roeser et al., 2013; Singh et al., 2013; Soloway, 2011). It is conceded that qualitative studies may also suffer from a number of the limitations discussed above, such as social desirability bias and volunteer samples. However, it is asserted that the qualitative process provides participants with an opportunity (which is not available in most self-report surveys) to elaborate upon their experiences, thereby allowing a more complete picture of their experiences to emerge. This provides a deeper awareness of the processes that assist in creating beneficial outcomes for teachers as a result of mindfulness-based interventions.

Mindfulness and alternative schools

While the research is promising, the majority of the research into mindfulness and teachers, as detailed above, has been conducted in mainstream settings. Indeed, there is very little research into the use of mindfulness in alternative schools. Moreover, most of the research which does exist explores the effectiveness of mindfulness-based interventions with alternative school students (e.g. Salustri, 2010; Wisner, 2014) rather than teachers. However, the few teacher studies which do relate broadly to the context of alternative schools, suggest that mindfulness interventions may have more impact in challenging settings (Jennings et al., 2011; Singh et al.,

2013). This suggestion is, perhaps, not surprising as there may well be more room for improvement in the challenging environments of these schools. These results indicate that additional research is required to more fully understand the impact of mindfulness interventions in enhancing teacher well-being, particularly in the context of alternative schools. A detailed discussion of the most relevant of these studies follows.

Jennings and colleagues' research (Jennings et al., 2011; Jennings et al., 2013; Schussler et al., 2016; Sharp & Jennings, 2016) into the Cultivating Awareness and Resilience in Education program (CARE) is one of the few studies which has been conducted in alternative or 'high risk' educational settings. The results of the CARE pilot program (Jennings et al., 2011) are of particular relevance to the current research due to the suggestion made, in that study, that the CARE program may be more effective in a high-risk setting.

The CARE program combines formal and informal mindfulness practices with emotional skills training and compassion practices to enhance teacher social and emotional competence (SEC) in the classroom. The CARE pilot program was conducted with two cohorts of educators in the USA. Teachers from Study A were recruited from a high-poverty urban setting characterised by low student performance, defined as 'high risk' (Jennings et al., 2011, p. 37), while Study B focused on student teachers and their mentors employed in a semi-rural town setting. The quantitative results for Study A demonstrated beneficial outcomes on a number of measures related to well-being, with significant improvements in measures of mindfulness and time urgency (an indicator of burnout). Moreover, teachers in the high-poverty urban setting were very satisfied with their experience of the program, with a majority also reporting improvements in student behaviour and academic outcomes. A large majority of these teachers agreed that the CARE program should be integrated into professional development training for all teachers.

Results from Study B were more modest, with only mild non-significant improvements in some facets of mindfulness evident. The Study B participants were found to have experienced improvement on measures demonstrating support for student autonomy, however, teachers from this cohort did not express the same level of satisfaction with the program. The variation in outcomes may be related to the differences in school contexts. Study A was conducted in a high poverty setting

catering for students with behavioural and academic difficulties, and featured a perception of marginal institutional support for teachers. In contrast, Study B was a more stable, well-funded school with fewer 'at-risk' students, greater institutional support and low teacher turnover. In contrast to Study A, none of the teachers from Study B reported any change to their perception of classroom management or student behaviour as a result of the program. In addition, the mentor teachers in Study B expressed far less need for stress reduction leading to a suggestion that more experienced teachers, or at least those who receive high levels of institutional support (such as these mentor teachers) may not derive significant benefit from mindfulness interventions. The Study B teachers did agree that CARE should be incorporated into teacher professional development programs. However, they also reported difficulty with some aspects of the program, including program length and inclusion of some of the program exercises. Based on their results, the researchers concluded that the CARE program was not as relevant to the needs of teachers in the semi-rural setting and may be more appropriate for teachers in the emotionally challenging context of working with at-risk students. This raises interesting parallels with the alternative school setting of the current study.

Customising mindfulness interventions for teachers

The CARE program outlined in the previous section is typically delivered over four to six weeks. This is in contrast with the traditional eight week MBSR format. Indeed, one of the key issues emerging from the research is the fact that formats for teacher interventions which have been undertaken to date vary considerably, ranging from approximately one month (Jennings et al., 2011) to several years (Bernay, 2014). Moreover, some interventions combine mindfulness training with a range of other strategies, such as emotional skills and wellness training, making causality difficult to establish (e.g. Bernay, 2014; Beshai et al., 2016; Jennings et al., 2013; Soloway, 2011). Thus, the literature related to both mainstream and alternative school settings raises questions as to the most appropriate format for teacher-based mindfulness interventions.

While there is logic in using mindfulness-based interventions that have been well-tested and validated, such as MBSR, these interventions were created primarily for clinical populations (e.g. Kabat-Zinn, 1982). Thus, there is justification for developing new programs suited specifically to the context of teachers (e.g. Beshai et

al., 2016). However, the trial of new interventions is accompanied by a lack of empirical validation and, thus, needs to be introduced with a program of empirical assessment (Lomas et al, 2017).

One of the most recent studies to assess the use of mindfulness in relation to teacher well-being was a non-randomised feasibility trial conducted across a number of schools in England (Beshai, 2016). While this study was not based in an alternative school, the focus of the study on customising a mindfulness intervention to the needs of teachers is highly relevant to the current study. The intervention condition used the pilot program ‘.b Foundations Course’, developed by the Mindfulness in Schools Project (MiSP).

The ‘.b Foundations Course’ comprises nine sessions of 75 minutes duration each. Thus, while the course content largely mirrors the traditional MBSR content, it is delivered over a shorter time frame and also includes material specifically tailored to the role of teachers. Another important variation from the MBSR program is the ‘.b’ expectation of only 10-40 minutes of home practice six days per week, compared to the 45 minutes expected in an MBSR course.

In Beshai et al’s study (2016), intervention condition teachers reported greater reductions in stress and increases in well-being, mindfulness and self-compassion post-intervention in relation to the comparison group. Interestingly, the study found no significant differences between participants on the basis of number of training sessions attended, which raises questions about the relationship between frequency of mindfulness practice and outcomes. In fact, the research in general contains no agreement as to the dose or frequency of mindfulness training required in order to create beneficial outcomes (Irving, Dobkin & Park, 2009). In general populations, beneficial effects have been observed after as little as 20 minutes practice per day for 3 days (Farb et al., 2013) but the long-term effects of such short-term interventions are unclear.

A strength of this study (Beshai et al., 2016) was its exploration of the use of a modified mindfulness intervention which had been contracted to fit into the busy schedules of a teacher population. The suggestion that customisation of mindfulness training may be both practical and beneficial for teacher populations is of particular importance to the current study’s intervention which is also based on a contracted MBSR program.

Sustainability of teacher-based mindfulness interventions

The related issues of dose, frequency and sustainability of beneficial outcomes from mindfulness interventions, however, persist in the research. There are very few longitudinal studies into the effects of mindfulness interventions with teaching populations which attempt to address these issues; moreover, the longitudinal studies which do exist report inconsistent results in terms of the maintenance of beneficial outcomes (e.g. Bernay, 2014; Poulin, 2009; Sharp & Jennings, 2016).

One recent study (Bernay, 2014) followed the experience of five beginning teachers who had participated in a mindfulness intervention as part of their three year pre-service training. This study found that all of the volunteer participants continued to use mindfulness strategies into at least their second year of teaching. Bernay's study is one of the few studies which has taken such a longitudinal approach to this issue, which may have led to sustainable results. In contrast, Poulin's research (2009), which followed the short-term delivery structure typical of the MBSR program, revealed that participants struggled with maintaining independent mindfulness practice. This contrasts with findings made in some clinical and non-clinical non-teaching populations which indicate that over 75% of participants trained in mindfulness skills continue to practise mindfulness either regularly or sporadically over time frames ranging from 3 to 48 months (Baer, 2003; Kabat-Zinn, Lipworth, Burney & Sellers, 1987). This raises important issues of program feasibility and sustainability within educational contexts (Albrecht et al., 2012; Meiklejohn et al., 2010; Roeser, Skinner, Beers & Jennings, 2012).

To date, little analytic attention has been paid to the barriers to sustaining a mindfulness practice (Poulin, 2009; Singh et al., 2013). The most recent teacher studies (Schussler et al., 2016; Sharp & Jennings, 2016) are just beginning to take a long-term approach to the application of mindfulness in schools. In one of these studies (Schussler et al., 2016), focus group participants reported a desire for a greater sense of community and opportunities to relate to their peers around the skills learned in the CARE program. The researchers concluded that mindfulness-based interventions may be most effective when implemented through a whole school approach (e.g. Schussler et al., 2016). A strength of this study lay in its longitudinal approach to participant experiences; focus groups (Schussler et al., 2016) were conducted 4.5 months after the original training, while interviews (Sharp & Jennings,

2016) were conducted 12-14 months after completion of the original CARE intervention, thus providing useful data as to long-term effectiveness of this intervention.

The beneficial impact of mindfulness training is evident, but there are questions around the long-term effects of such training. Thus, the need to identify barriers to practice, as well as finding ways to encourage the sustainability of mindfulness interventions, is a recurrent concern in the research (Flook et al., 2013; Poulin, 2009). The issue of sustainability, together with an exploration of the aspects of interventions which are perceived as barriers to practice, constitute a central focus of the current study.

Caveats concerning school-based mindfulness interventions

It is important to note, at this point, a number of caveats concerning the delivery of school-based mindfulness interventions. While these interventions may have beneficial outcomes in terms of improving educator well-being, the implementation of such interventions should not come at the expense of structural changes to a system that is, arguably, inherently stressful (Lomas et al, 2017). Mindfulness-based interventions should not be regarded as a sustainable remedy for the stressors imposed as a result of the way education systems are structured. Moreover, it is acknowledged that this concern is situated within a larger debate around the use of mindfulness to increase worker resilience by helping workers ‘adapt’ to stressful work environments rather than striving to transform structurally-induced stressors created by these environments (Van Gordon, Shonin, Zangeneh & Griffiths, 2014).

In addition, despite suggestions regarding the potential efficacy of whole-school mindfulness interventions (Schussler et al., 2016), research indicates that participation in these interventions should not be compulsory. Mindfulness may not fall within everyone’s ‘comfort zone’ (Lomas, Cartwright, Edginton & Ridge, 2015) and may even be harmful to people with certain pre-existing mental health conditions (Dobkin, Irving & Amar, 2012). For these reasons, a degree of sensitivity is necessary in facilitating teacher participation in mindfulness-based interventions.

2.6 RESEARCH PURPOSE

A review of the literature revealed a number of trends in the research. First, the emotional work of teachers is highlighted as having a potential impact on teacher stress and burnout. Second, the research into alternative education is sporadic, at best, and indicates the need for professional development to support the emotional work of teachers employed in this context. Third, emotion regulation ability is identified as critical to support the emotional work of teachers. Fourth, it is suggested that mindfulness may promote emotion regulation ability. A number of studies have explored the use of mindfulness to address the inter-related issues of teacher stress and well-being, with promising results. However, there are still gaps in the research in terms of inconsistent results, inadequate methodological rigour, lack of a comprehensive theoretical framework and overall sustainability of mindfulness interventions, particularly in alternative schools.

The purpose of this study is, thus, two-fold. First, it seeks to extend the research into the perceived impact of mindfulness as a strategy to manage teacher stress and to support the emotional work of teachers in an alternative school; second, it seeks to explore the model of mindful emotion regulation as a theoretical framework to explain the potentially beneficial outcomes of mindfulness training for teachers in an alternative school. From this purpose, the following research questions emerge:

1. What are teachers' mindfulness, emotion regulation, emotional exhaustion and stress levels pre- and post- a mindfulness intervention?
2. How do teachers perceive the impact of a mindfulness-based intervention as a strategy to manage stress and support the emotional work of teaching?
3. What are the perceived barriers to mindfulness practice?

Chapter 3: Research Design

This chapter describes the research design adopted by this study to achieve the purposes stated in Chapter 1. Section 3.1 discusses the methodology used in the study. Section 3.2 introduces the research design. Section 3.3 explores the specific context of the study, while section 3.4 describes the participants in the study. Section 3.5 describes and justifies the data collection methods used for the study. Section 3.6 outlines the procedure and the timeline for each stage of the study. Section 3.7 discusses analysis of the data; and finally, section 3.8 discusses the ethical considerations underpinning the research.

3.1 METHODOLOGY

The methodological approach to this study could be described as a "blurring of genres" (Geertz, 1980). The methodology was informed by a number of paradigms, including post-positivism and constructivism. These paradigms could, quite rightly, be considered contradictory. However, this approach was adopted in order to ensure a more receptive, innovative and diverse approach to the research problem than may have been the case under the constraints of a strictly defined methodological approach. Through this approach, a more comprehensive range of research methods became available to the research team in order to fully address the research purpose (Johnson & Onwuegbuzie, 2004).

The study utilises a mixed methods design. Qualitative data, taking the form of interview responses and journal reflections, were used to reveal the participants' experiences of mindfulness training. In addition, however, participants were asked to complete a number of questionnaires related to educator stress, emotional exhaustion, emotion regulation and mindfulness. While questionnaires are typically used for quantitative analysis, the questionnaires in this study were not used to produce inferential analyses with any statistical significance. Rather, the questionnaire data were used to create a descriptive profile for each of the participants and, as such, were used to inform the analysis of qualitative data. This approach to data collection and analysis was intended to reveal both subjective and

objective aspects of the participants' perceptions of the mindfulness intervention which formed the focus of this study.

The qualitative data were intended to reveal the subjective feelings and beliefs of the participants involved in the study. Such an approach derives from a constructivist paradigm (Guba & Lincoln, 2005). This approach was considered necessary given the nature of mindfulness, one of the central phenomena of this study. Mindfulness can be described as a state of consciousness which is subjectively experienced through thought, feeling and sensation (Kabat-Zinn, 1990). As such, it was critical to inquire about the participants' subjective experiences of the mindfulness intervention. The Dalai Lama, in his recent discussion on the relationship between science and spirituality (Dalai Lama XIV, 2005), argues that an exploration of the subjective experience of cognitive, emotional and psychological states is essential to inform an understanding of consciousness. For this reason, he suggests that the application of a 'first-person method' is critical to investigations of the nature of consciousness, where the mind of the individual is simultaneously "the observer, the object and the means of investigation" (Dalai Lama XIV, 2005, loc. 1650). The qualitative approaches to data collection employed in this research performed the function of this 'first-person method'.

However, the study was also designed to explore whether the subjective experiences of the participants were supported by more objective data. This approach draws support from the Dalai Lama's view that, "the combination of the first-person method with the third-person method offers the promise of a real advance in the scientific study of consciousness." (Dalai Lama XIV, 2005, loc. 1665) 'Third person' methods may take on a range of forms, from neuroscientific research which maps the changes in brain functioning which mindfulness appears able to produce (e.g. Davidson & Lutz, 2008), to objective measures of physiological stress (Flook, Goldberg, Pinger, Bonus & Davidson, 2013) or attentional focus (Roeser et al., 2013).

By supplementing qualitative data with questionnaire data, this study also aspires to the 'third-person method', taking a quasi-post-positivist stance (Guba & Lincoln, 2005). This stance suggests that there are *objective* aspects to *subjective* reality which we can come to know, at least in part, through a comparison of self-report questionnaires taken over time. The researchers acknowledge that the

questionnaires, by virtue of being self-report, retain an element of subjectivity. However, by adopting a questionnaire format and by repeating the questionnaires over time, a degree of objectivity is preserved. By taking this approach, the study exploited the potential of combining research methods to provide multiple perspectives on the complex topic of mindfulness in education. By utilising methods derived from both constructivist and post-positivistic approaches, this study contributes to a deeper understanding of how a small group of educators working in an alternative school setting experienced a mindfulness intervention to support the emotional work of teaching.

3.2 RESEARCH DESIGN

The study took the form of a case study, following the experiences of four educators who participated in a mindfulness intervention in a Queensland metropolitan alternative secondary school. Given the broad nature of the current research, it is argued that a mixed methods case study design was appropriate. A collective case study design emphasises complexity (Stake, 1995). Thus, this approach allowed for an examination of both typical and unique instances of the current participants' experiences of the mindfulness intervention delivered as part of this research. Moreover, given the emphasis on the participants' subjective experiences, a case study approach afforded a means of providing the "rich and specific detail" of these experiences (Platt, 1999, pp. 164-5). This research design accommodated a range of data sources which, together, created a thorough picture of the participants' experiences and added to an understanding of the precise aspects of mindfulness interventions which have the most effective impact. This approach is supported by recent research which suggests the need for qualitative methods to elaborate upon participant experiences of mindfulness-based interventions (Sharp & Jennings, 2016). Moreover, as Platt suggests, the humanistic mode of presenting case study material lends an "aesthetic appeal" not typical of all methodologies (1999, pp. 164-5).

3.3 CONTEXT - THE FLEXIBLE LEARNING CENTRE

The current study was conducted with the participation of educators employed at a metropolitan Queensland Flexible Learning Centre (FLC). The FLC, or ‘flexi-school’ began in 1990 as an education initiative by the local city council for homeless young people and is now one of a cluster of flexi-schools which forms part of the alternative education sector in Australia. The cluster of flexi-schools seeks to provide flexible learning options to enable disenfranchised young people to re-engage with learning (EREA, 2013).

The flexi-school at the centre of this research project is a learning community that aims to provide a safe and caring space for young people aged between 14 and 25. The young people who access the school have experienced backgrounds such as homelessness, domestic violence, mental illness, drug and alcohol abuse, contact with the youth justice system and a range of issues stemming from poverty and marginalisation (EREA, n.d.-b). The school offers activities and referrals that allow these young people to establish hope for the future. (FLC Head of Campus, personal communication, 5 May 2016)

The flexi-school offers a formal curriculum in Vocational Education and Training (VET) and Queensland Curriculum and Assessment Authority (QCAA) approved courses, including formal qualifications in English, Maths, Independent Living Skills, Multi Arts, Visual Arts and Music. Young people are enrolled either in year 10 or Senior, and the transition from the flexi-school to further education is supported by a dedicated Career and Work Pathways Coordinator. In addition to the formal curriculum, the school offers an informal curriculum in care, relationship-building and communication (EREA, n.d.-a).

The educators who work with the young people come from backgrounds as diverse as community development, arts and music, education, administration, counselling and nursing. Not all educators are qualified teachers registered with the Queensland College of Teachers (QCT), the regulatory body for the teaching profession in Queensland. However, the school makes no distinction between the various professional backgrounds represented amongst the educators at the school. The term ‘worker’ is used to refer to all members of staff. All workers are engaged in the learning community equally in terms of respect and in the nature of their day to day work (FLC Head of Campus, personal communication, 5 May 2016). The

workloads of all educators at the school were therefore considered to be equal for the purposes of this research.

The school is founded on the following principles: rights, respect, relationships, responsibility, and safe and legal. These principles provide a foundation for determining the actions taken by the workers and young people at the FLC. Young people are consulted in all decisions affecting their education and engagement, and relationships between workers and young people are fundamental. The notion of community is central to the long-term and day-to-day operation of the school. (EREA, n.d.-a)

Given the priority given to community-building within the school, a significant component of the workload of the flexi-school educators is the provision of emotional support to the young people who access the school. Thus, the emotional demands of the job are high (FLC Head of Campus, personal communication, 27 April 2016). Most young people attending the FLC are traumatised and many have significant mental health issues. Moreover, there are significant social and economic barriers facing the young people at the school. The educators at the flexi-school aim to approach each young person as an individual and address their issues holistically and in a relationship-centred way; thus, the possibility of emotional upheaval is strong. The rate at which staff engage with the young people results in empathic exposure to the young people's traumatic experiences which can give rise to the possibility of vicarious trauma (FLC Head of Campus, personal communication, 27 April 2016). The signs and symptoms of vicarious trauma are similar to those suffered as a result of direct trauma, although they are generally less severe (Pryce, Shackelford & Price, 2007).

On-site support for the young people is provided in the form of counsellors, youth workers, a family room with a dedicated worker, and physical activity programs. The FLC also partners with various community organisations to provide additional support for the young people (EREA, n.d.-a). In contrast, despite the emotional demands of the job, the FLC workers have limited opportunities for clinical debriefing. Access is provided for staff to debrief with a psychologist or counsellor through an Employee Assistance Program (EAP). However, staff tend to rely on established in-house practices to maintain equilibrium (FLC Head of Campus, personal communication, 27 April 2016). These in-house practices include

regular supervision, staff practice meetings, retreats, professional development days and access to a network support team (FLC Head of Professional Learning, personal communication, 8 November 2016).

The school also prioritises reflective practices (FLC Head of Campus, personal communication, 10 November 2016) which are important for both individual self-care and for the cultivation of community. As part of these practices, some of the workers had previously been introduced to mindfulness techniques but experiences varied widely amongst the workers and a regular meditation practice, although attempted, not been established as a regular practice within the school community (FLC Head of Campus, personal communication, 27 April 2016). The importance placed on reflective practices, however, suggests an openness to engage in practices comparable to mindfulness to support the emotionally demanding workloads of the flexi-school educators.

3.4 PARTICIPANTS

Registration for the mindfulness intervention was open to all interested educators from the participating alternative school. While not all educators at the school were qualified teachers registered with the Queensland College of Teachers (QCT), all of the educators did have some form of tertiary qualification. As such, voluntary registration for the intervention was open to all educators employed at the school, whether they had completed formal teaching qualifications or not. This procedure resulted in a convenience sample of educator-participants.

Relevant participant demographic information is included in Table 3.1. Consent forms and pre-training questionnaire data were obtained from an initial sample of seven participants (N=7). Of these seven registrants, four participants (n=4) completed all components of the research; that is, they attended at least 4 of the 6 intervention sessions, completed both pre- and post-intervention questionnaires, submitted their reflection journal and attended individual post-intervention interviews.

Table 3.1 *Participant demographics*

PARTICIPANT DEMOGRAPHICS		
	Initial sample	Final sample
AGE	N=7	n=4
30-39	1	1
40-49	2	1
50-59	3	1
60-65	1	1
GENDER		
female	4	2
male	3	2
EDUCATIONAL QUALIFICATIONS		
Undergraduate degree	5	2
Postgraduate degree	2	2
YEARS OF TEACHING EXPERIENCE		
1-5	1	1
6-10	1	1
11-15	1	
16-20	2	1
≥ 21	2	1

3.5 DATA COLLECTION

Data collection took place pre-intervention, during the intervention, and post-intervention. Table 3.2 provides specific information regarding the timing of data collection.

Table 3.2 *Data collection timeline*

PRE-INTERVENTION	INTERVENTION	POST-INTERVENTION	
15/4/2016 – 26/4/2016	26/4/2016 – 31/5/2016	2/6/2016 – 22/6/2016	9/6/2016 - 17/6/2016
Questionnaire	Weekly semi-structured journal reflections completed during training session	Questionnaire	Individual semi-structured interviews

3.5.1 Instruments

Questionnaires were administered pre- and post-intervention in order to provide baseline and follow-up data in relation to a range of measures relevant to the research purpose. The first part of the questionnaire collected brief demographic information as to age, gender, educational qualifications and years of teaching experience (Appendix A). This information is included in Table 3.1 above. The demographic section of the questionnaire also generated a unique identifying code for each participant which was linked to the substantive part of the questionnaire. The use of this code enhanced participant privacy and allowed participant data sets to

be linked, de-identified and tracked over time. The substantive part of the questionnaire assessed participants' baseline stress, emotional exhaustion, emotion regulation ability and mindfulness levels.

The substantive part of the post-intervention questionnaire was identical to the pre-intervention questionnaire. The post-intervention questionnaire generated another unique identifying code which was linked with the pre-intervention code for each participant to enable comparison of pre- and post-intervention data.

The pre- and post-intervention questionnaires were constructed by compiling relevant sections of the following self-report measures: Depression Anxiety Stress Scale (stress sub-scale) (DASS21; Lovibond & Camilleri, 2014), Maslach Burnout Inventory (emotional exhaustion sub-scale) (MBI; Maslach & Jackson, 1981), Five-Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006), Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) (see Appendices B-E). The following section provides further information on each of these self-report measures.

1. Depression Anxiety Stress Scales (stress sub-scale) (DASS21) (Lovibond & Camilleri, 2014):

The DASS21 is 21-item self-report scale which is reported to validly and reliably measure dimensions of depression, anxiety and stress (validity coefficient alphas: 0.91, 0.84 and 0.90 respectively; reliability coefficient alphas: 0.88, 0.82 and 0.90) (Crawford & Henry, 2003; Henry & Crawford, 2005).

The current study employed only the stress sub-scale of the DASS21. This was a departure from recent teacher mindfulness studies which have taken clinical measures of depression and anxiety (Flook et al., 2013; Frank et al., 2015; Roeser et al., 2013). A deliberate choice was made to use only the stress sub-scale of the DASS21 given the focus of the current study on the general experience of stress in a non-clinical teacher population. This focus rendered measures of depression and anxiety unnecessary. Although stress, anxiety and depression are all moderately inter-correlated, they are factorially distinct, with the stress sub-scale characterised specifically by nervous tension, difficulty relaxing, reactivity and irritability ("DASS FAQ", n.d.). A combination of all three scales may have resulted in a more general assessment of participant stress levels. However, in order to reduce administration

time, the decision to apply only the stress sub-scale was considered to be the most balanced approach to achieving the study's aims while also meeting ethical considerations of minimising undue inconvenience to the participants. Furthermore, the questionnaire results were not intended to be statistically significant. Rather, they were used to create basic profiles of each participants' stress levels which were further informed by qualitative data. As a result, the DASS21 stress sub-scale provided an appropriate level of data for the study's purposes.

Example items from the stress sub-scale include, "Over the past week, I found it hard to wind down" and "Over the past week, I found it difficult to relax." The procedure for administration and interpretation of the DASS scale is described in the DASS Manual (Lovibond & Lovibond, 1995). DASS items are scored on a four-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much). Total scores are obtained by adding the scores for all items in the scale. The current study used only items from the DASS-21, which is a short-form version of the full 42 item DASS scale. Scores for the DASS-21 are converted to full scale DASS scores by multiplying by two. As such, the DASS-21 stress data was able to be interpreted by reference to the normative values for the full scale (see Table 3.4).

2. Maslach Burnout Inventory (emotional exhaustion sub-scale) (MBI) (Maslach & Jackson, 1981):

The MBI is the most frequently used instrument to determine whether respondents are at risk of burnout. To assess the likelihood of burnout, the MBI measures three dimensions of burnout: emotional exhaustion, depersonalisation and personal achievement. These three components have received substantial empirical support for their validity with reported coefficient alphas of 0.94, 0.79 and 0.71 respectively (Holland, Michael & Kim, 1994; Koeske & Koeske, 1989). However, the length of the 22-item MBI can limit its practicality for research (West, Dyrbye, Sloan & Shanafelt, 2009). Thus, the survey used in the current study includes only the emotional exhaustion sub-scale. Example items from this seven item sub-scale include, "I feel emotionally drained from my work" and "I feel frustrated by my job". The decision to assess only emotional exhaustion is justified by reference to research which considers emotional exhaustion to be the core component of burnout (e.g. Hulsheger et al., 2013; Koeske & Koeske, 1989; Tsouloupas et al., 2010). This

approach is warranted given the current study's focus on the emotional work of teachers. Further, previous research has found that even single item measures of emotional exhaustion can provide useful burnout data (West et al., 2009).

The procedure for administration and interpretation of the MBI is described in the MBI Manual (Maslach, Jackson, & Leiter, 1996). MBI items are scored on a seven-point Likert scale which ranges from 0 (never) to 6 (every day). Total scores are obtained by adding the scores for all items in the scale.

3. Five-Facet Mindfulness Questionnaire (FFMQ) (Baer et al., 2006):

The FFMQ is a 39-item scale which was developed from five separately constructed mindfulness scales. From these scales, analysis revealed five recurring dimensions of mindfulness. These five dimensions are: observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience. The first four sub-scales contain 8 items each, while the fifth sub-scale (non-reactivity to inner experience) has 7 items. Example items on the FFMQ include, "I am easily distracted" and "I find myself doing things without paying attention". FFMQ items are scored on a five-point Likert scale ranging from 1 (never or very rarely true) to 5 (very often or always true). For 19 items marked "R", the scoring is reversed (change 1 to 5, 2 to 4, 4 to 2, 5 to 1, 3 remains unchanged). Total scores for each sub-scale (or facet of mindfulness) are obtained by adding the scores for all items in the sub-scale. A total score for the entire scale is obtained by adding together scores for all 39 scale items. (Baer, n.d.)

Choice of instrument to measure mindfulness within the present study was problematic given the range of self-report surveys which exist purporting to measure the construct. A number of the self-report measures have operationalised mindfulness as a single-faceted construct characterised purely by attentional aspects (e.g. Mindful Attention Awareness Scale, MAAS; Brown & Ryan, 2003); while others argue that this does not allow for the subtleties of the classical definition of mindfulness (Chiesa, 2013). A recent scale (Mindfulness in Teaching Scale) suggests the presence of two distinct facets measuring both interpersonal and intrapersonal mindfulness specifically for teachers (Frank, Jennings & Greenberg, 2016).

Part of the problem inherent in the operationalisation of mindfulness as a construct derives from conceptual differences in understanding mindfulness. However, these differences are compounded by differences among respondents in understanding scale items, which seems to depend on length and experience of meditation practice (Grossman, 2008). Thus, there is a problem in measuring mindfulness in experienced meditators as compared to non-meditators and also as a pre-post-intervention measure (Van Dam et al., 2009). Moreover, there are potentially significant discrepancies between respondents' self-rated mindfulness and actual levels of mindfulness (Grossman, 2008). The difficulties in accurately assessing mindfulness levels arguably made the qualitative component of this research more valuable as it was able to provide open-ended insight into the psychological experiences associated with mindfulness rather than the closed constructs proposed by measurement instruments.

Given the challenges outlined in measuring mindfulness, the FFMQ was chosen for use in the current study for a number of reasons. First, the FFMQ measures the qualities of mindfulness adopted for the current study: *present moment attention* and *non-judgmental awareness*. Present moment attention is measured by a combination of the first three facets of the FFMQ: observing, describing and acting with awareness; while non-judgmental awareness is measured by the fourth facet, non-judging of inner experience. In addition, the final facet of the FFMQ, non-reactivity to inner experience, measures a quality which may arise as a result of non-judgmental awareness. Second, a recent analysis by Siegling and Petrides (2014), concluded that the FFMQ appears to be one of the best options for the measurement of mindfulness. This analysis reported coefficient alphas for internal consistency ranging from 0.84 to 0.92. Finally, the FFMQ has been used in the most recent and methodologically rigorous research into mindfulness and teachers (Flook et al., 2013; Frank et al., 2015; Jennings et al., 2013; Lomas et al., 2017). Thus, its adoption in the current study furthers consistency and comparison of research results. The use of the FFMQ provides a concise snapshot of the respondents' perceptions of their own mindfulness levels and creates a straightforward, if not unassailable, means of comparing data relevant to the current research.

4. Emotion Regulation Questionnaire (ERQ) (Gross & John, 2003):

The ERQ is a 10-item scale designed to measure respondents' emotion regulation ability through cognitive reappraisal (adjusting the way a situation is interpreted to modify its emotional impact) or suppression (inhibiting outer signs of feelings). Respondents score each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Items 1, 3, 5, 7, 8 and 10 constitute the cognitive reappraisal sub-scale. An example item on this sub-scale is, "When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about." Items 2, 4, 6 and 9 constitute the suppression sub-scale. An example item on this sub-scale is, "I control my emotions by not expressing them." Total scores for each sub-scale are obtained by adding the scores for all items in that sub-scale.

The ERQ was developed by Gross and John (2003) in response to Gross' process model of emotion regulation. Thus, the ERQ was incorporated into the current study due to the study's reliance on Gross' process model of emotion regulation in its theoretical framework (see Section 2.4 above). Since its development, the ERQ has been used widely in studies of emotion regulation and has presented good psychometric properties. The measure demonstrates satisfactory internal consistency with coefficient alphas of 0.79 to 0.85 (Gross & John, 2003; Ioannidis & Siegling, 2015). The scale is used in this study to establish whether any changes in emotion regulation, as determined by responses to the ERQ, appear to be associated with changes in mindfulness over time.

3.6 PROCEDURE AND TIMELINE

The following sections outline the procedure used in this study for collecting and recording data.

3.6.1 Intervention Timeline

Figure 3.1 is a visual timeline of the sequence of events undertaken for the study. A detailed description of the procedure undertaken at each stage of the study is provided in the sections which follow.

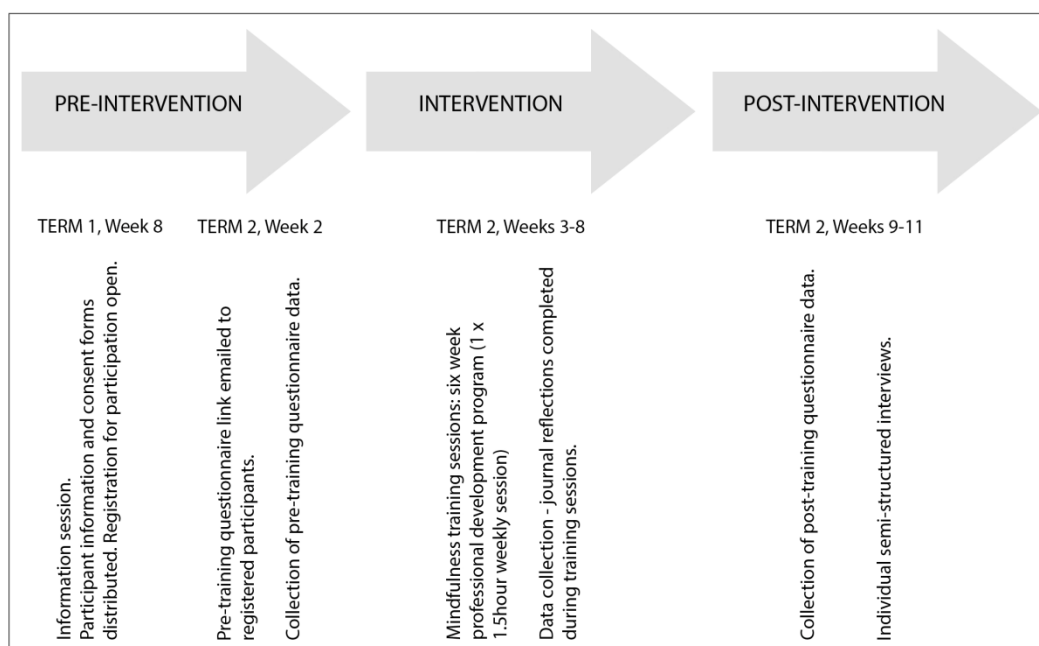


Figure 3.1 Intervention timeline

3.6.2 Pre-intervention

Pre-intervention procedure

An induction afternoon was offered at the flexi-school for educators who were interested in participating in a mindfulness professional development intervention. At this session, potential participants were provided with an overview of the proposed intervention, details of the research proposal and notice of the anticipated time commitment required. Upon the granting of ethical approval for the study, the Participant Information and Consent Form was distributed to interested staff. Signed consent forms were collected by the researcher at the first intervention session.

Pre-intervention data collection

The pre-intervention questionnaire comprising the measures described in Section 3.5.1 was administered online via QUT Key Survey. Participants were provided with access to an online link for the pre-intervention questionnaire via email one week prior to the mindfulness intervention start date. Respondent data was stored and maintained within QUT's secure network.

3.6.3 Intervention

Mindfulness intervention - structure and content

The study implemented a modified Mindfulness Based Stress Reduction (MBSR) intervention in Term 2, 2016 as part of the school's regular professional

development commitment. The intervention was delivered in a group format across six consecutive weeks, one afternoon per week for 1.5 hours. The intervention program included training in a range of formal meditation practices - such as guided meditation, breath awareness, body scans and gentle yoga - and informal mindfulness practices, which could be incorporated into everyday situations - such as mindful eating and mindful communicating. Participants were also provided with 10-15 minutes during each intervention session to complete structured journal reflections which documented their experiences, both in terms of specific mindfulness strategies, but also as to whether they noticed any changes in the ways they experienced stress or emotion regulation in their lives.

The study's justification for adapting the MBSR program stems from the relatively extensive history of research into the effectiveness of MBSR programs (e.g. Frank et al., 2015; Kabat-Zinn, 1982). The manualised treatment protocol of MBSR forms the basis of an already substantial body of research in both clinical and non-clinical populations, including a number of teacher studies (e.g. Flook et al., 2013; Gold et al., 2010; Napoli, 2004; Roeser et al., 2013). By adapting this protocol, the current study aimed to facilitate continuity and comparison with pre-existing research in order to more readily further any claims which could be made by the research. Many aspects of the essential structure and content of the traditional MBSR course were retained for the purposes of this study, but the course was modified to meet the specific needs of teachers and included a greater focus on inter-personal mindfulness. This modification was made in recognition of the highly social and emotional content of teachers' work, particularly in the context of alternative schools.

In recognition of the fact that teachers are subject to specific pressures during the course of a term, such as marking and report-writing, the intervention was offered over a contracted six week period (rather than the typical eight weeks) and the expectation for daily home practice six days per week was reduced to 15 minutes (rather than the typical 45 minutes). This decision was made upon consideration of a number of other teacher studies which have implemented contracted mindfulness-based interventions with beneficial outcomes (e.g. Beshai et al, 2016; Jennings et al., 2011), as well as research in non-education contexts which reports high MBSR attrition rates as a result of the extensive time commitment required for daily

meditation practices (e.g. Shapiro, Astin, Bishop & Cordova, 2005). In light of this research, modifications as to time commitment were implemented to make the intervention more accessible for teachers. Participants were considered to have completed the course if they attended four out of six intervention sessions. This is in accordance with research which suggested that the minimum effective dose of similar mindfulness-based interventions was at least four of eight weekly sessions (Segal, Teasdale, & Williams, 2004). The following table outlines the mindfulness intervention structure:

Table 3.3 *Mindfulness for teachers intervention overview*

MINDFULNESS FOR TEACHERS INTERVENTION OVERVIEW		
SESSION	COURSE CONTENT	MATERIALS
Pre-intervention	Introduction to mindfulness Course and research requirements Pre-intervention questionnaires	Participant information and consent forms Questionnaire link
Week 1	Review of pre-intervention Collection of consent forms Breath awareness practice Foundations of mindfulness Formal and informal practices: mindful eating practice Triangle of awareness: body scan practice Discussion: mindfulness in the classroom	Journal Reminder stickers Postcard: 3-minute breathing space
Week 2	Journal reflection One-minute sensory awareness Triangle of awareness: thoughts Spaciousness of thoughts practice Our story-telling minds: perception and cognitive filters Interrupting habitual thought patterns: labelling and metaphors	Postcards: one-minute sensory awareness technique and STOP technique
Week 3	Journal reflection Mindfulness of sounds practice The five hindrances Triangle of awareness: feelings Stress: tips for developing resilience Mindful movement practice Five stages of dealing with feelings Noticing pleasant events Meditation on feelings	Postcards: two feet, one breath technique and 3Ps
Week 4	Journal reflection Meditation with bells Working with resistance Meditation on feeling tones Resistance in the classroom Dialoguing with resistance Noticing unpleasant events Walking meditation	Postcard: RAIN technique

MINDFULNESS FOR TEACHERS INTERVENTION OVERVIEW

Week 5	Journal reflection Loving-kindness and compassion Loving-kindness meditation Inter-personal mindfulness Mindful communication Meditation with bells	Postcard: loving-kindness technique
Week 6	Journal reflection Choiceless awareness meditation Relational neuroscience Mindfulness at work The way forward Review, wrap-up and follow-up	Resources for moving forward: books, websites, organisations Questionnaire link

The mindfulness intervention was delivered on-site at the participating school, primarily for the sake of convenience, but also in response to previous research which has explored the idea that on-site training may assist in promoting a group commitment to self-care and well-being and a positive school climate for staff (Harris et al., 2016; Roeser, 2016). As part of the mindfulness intervention, participants were provided with a range of materials, including readings related to the course content for each week, a personal reflection journal in which to respond to guided questions during each intervention session, weekly recordings of guided meditations, and postcards and stickers as visual reminders of mindfulness techniques covered during each session.

The mindfulness intervention was delivered by the researcher. Prior to facilitating the intervention, the researcher had over 3 years of personal mindfulness experience, including personal completion of the Mindfulness Based Stress Reduction (MBSR) course. As an educator, the researcher had undertaken mindfulness training, at both foundation and curriculum levels, through Mindful Schools, an established USA-based organisation which has an evidence-based focus and has trained more than 10,000 mindfulness educators in the last decade (<http://www.mindfuleducation.com.au>). Prior to the intervention, the researcher also had almost 15 years of teaching experience within the Australian education system and, in addition, had experience delivering a range of courses, including mindfulness training, to a variety of age groups ranging from children to adults. Thus, the researcher's background was equivalent to the experience required by certain mindfulness teaching standards, such as the Guidance for Teaching Mindfulness (U.K. Network of Mindfulness-Based Teacher Trainers, 2011).

The advantages and ethical implications of the primary researcher taking on the role of mindfulness facilitator are considered in sections 3.7.2 and 3.8 respectively. Overall, however, it is submitted that this approach is a strength of the current study in that it allows the insights of the researcher, as a mindfulness practitioner, to more readily make sense of the participants' subjective experiences of the current mindfulness intervention.

Intervention data collection

Data collected during the intervention period consisted of participants' personal journal reflections. During each intervention session, participants were provided with 10-15 minutes to respond to semi-structured reflection questions. Participants were asked to respond to questions, such as: "Did you remember to practise everyday mindfulness this week? If so, what did you notice?" and "If you didn't practise as much as you would have liked to this week, what barriers did you notice?" After the final mindfulness intervention session, participant journals were collected, scanned and transcribed for subsequent analysis.

3.6.4 Post-intervention

Procedure and data collection

Questionnaire

The post-intervention questionnaire was administered online via QUT Key Survey. Participants were provided with access to an online link for the post-intervention questionnaire via email in the days following the final intervention session. All participants had completed the post-intervention questionnaire within three weeks of conclusion of the intervention. Respondent data was stored and maintained within QUT's secure network.

Semi-structured interviews

Semi-structured interviews were held with each of the four case study participants within three weeks of the conclusion of the intervention. Interview questions focused upon the participants' current perceived mindfulness levels, emotion regulation abilities, stress levels, and emotional exhaustion, as well as additional questions about the perceived benefits of and barriers to the mindfulness intervention (see Appendix F - Post-Interview Protocol).

An experienced independent interviewer was engaged for the purpose of conducting the interview process. This decision was made to ensure that participants felt able to freely discuss their experiences of the intervention; this freedom may have been compromised had the researcher conducted the interviews given that the researcher was also the mindfulness facilitator in this study. Participants were provided with the interview questions via email approximately one week in advance of their scheduled interview. Interviews were conducted by phone at a pre-arranged mutually convenient time. Each interview lasted between 30 to 45 minutes and was audio recorded for subsequent transcription.

Member-checking

All of the original seven participants were provided with a write-up of their individual results via email two months after completion of data collection. Participants were invited to review the accuracy of the data, and findings emerging from the data. Three of the original seven participants responded with no changes required. The remaining four participants did not respond.

3.7 ANALYSIS

3.7.1 Questionnaire data analysis

Each questionnaire was scored in accordance with instructions from the relevant manual or publication, as described in Section 3.5.1 above.

DASS-21 (Stress)

The prescribed scoring procedure was followed for both pre- and post-intervention questionnaire data. Individual participant stress data were compared with the published DASS severity ratings shown in Table 3.4, to provide a severity rating (from normal to extremely severe) for each participant's stress levels both before and after completion of the mindfulness intervention. Pre- and post-intervention stress levels were compared for each participant to assess whether there had been any change in stress levels subsequent to the mindfulness intervention. No further statistical analysis of this data took place due to the small sample size.

Table 3.4 *DASS severity ratings*

Severity rating	
Normal	0-14
Mild	15-18
Moderate	19-25
Severe	26-33
Extremely severe	34+

Note: Adapted from *Manual for the Depression Anxiety Stress Scale* (2nd ed.), by Lovibond, S.H. & Lovibond, P.F. Copyright 1995 by S.H. Lovibond & P.F. Lovibond School of Psychology, UNSW.

MBI (Emotional exhaustion)

The prescribed scoring procedure was followed for both pre- and post-intervention questionnaire data. The data was then interpreted by reference to published normative values of emotional exhaustion experienced by teachers, ranging from low to high (see Table 3.5). Individual participant data were compared with these normative values, to categorise each participant's emotional exhaustion levels both before and after completion of the mindfulness intervention. Pre- and post-intervention levels of emotional exhaustion were compared for each participant to assess whether there was any change subsequent to the mindfulness intervention. No further statistical analysis of this data took place due to the small sample size.

Table 3.5 *Categorisation of emotional exhaustion (MBI) scores for teachers*

Range of Experienced Burnout	Emotional Exhaustion
Low (lower third)	≤ 16
Average (middle third)	17-26
High (upper third)	≥ 27

Note: Adapted from *Maslach Burnout Inventory Manual* (3rd ed.), by Maslach, C., Jackson, S. E., & Leiter, M. P. Reproduction by special permission of the Publisher, Mind Garden, Inc., www.mindgarden.com. Further Reproduction is prohibited without the Publisher's written consent.

ERQ (Emotional regulation processes - reappraisal and suppression)

The prescribed scoring procedure was followed for both pre- and post-intervention questionnaire data. The data were interpreted by reference to published means for both reappraisal and suppression (see Table 3.6). This comparison allowed a determination of each participant's emotion regulation tendencies both before and after completion of the mindfulness intervention. Pre- and post-intervention tendencies were compared for each participant to assess whether there was any change subsequent to the mindfulness intervention. No further statistical analysis of this data took place due to the small sample size.

Table 3.6 Overall means for emotion regulation processes

	Reappraisal	Suppression
Men	4.60	3.64
Women	4.61	3.14

Note: Adapted from *Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being*, by Gross, J. J., & John, O. P. Copyright 2003 by American Psychological Association.

FFMQ (Mindfulness)

The prescribed scoring procedure was followed for both pre- and post-intervention questionnaire data. The data were then interpreted by reference to published means for all mindfulness facets (see Table 3.7) (Baer et al., 2008). The published means for both demographically-similar meditators and non-meditators were selected to compare against the current participants' scores. These published samples most closely reflected the characteristics of the current participant sample at pre- and post-intervention. The sample of regular meditators represented in the published means had a consistent meditation practice of at least once or twice per week. Many of these meditators also held a tertiary degree. The demographically similar non-meditators were drawn from a sample of university staff to ensure that most members of the non-meditating group also held a tertiary degree. Results from their study showed a significant positive correlation between meditation experience and all of the mindfulness facets other than acting with awareness. Level of education was also correlated with all mindfulness facets.

The current participants' *pre*-intervention scores were compared against means for the *non-meditators* sample; the current participants' *post*-intervention scores were compared against the published means for the *regular meditators* as, using the same criteria, the current participants would be considered regular meditators by completion of the intervention.

The overall mindfulness means for regular meditators and non-meditators were calculated by combining the means for each of the reported facets. Individual participant data were compared with facet and overall mindfulness means both before and after completion of the mindfulness intervention. Pre- and post-intervention mindfulness levels were compared for each participant to assess whether there was any change subsequent to the mindfulness intervention. No further statistical analysis of this data took place due to the small sample size.

Table 3.7 Means for mindfulness facets in two samples

	Non-meditators	Regular meditators
Observing	27.04	31.96
Describing	30.01	31.84
Acting with awareness	28.32	28.08
Non-judging of inner experience	29.13	32.44
Non-reactivity to inner experience	22.82	25.70
OVERALL MINDFULNESS	137.32	150.02

Note: Adapted from *Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Non-Meditating Samples*, by Baer, R. A. et al. Copyright 2008 by Sage Publications.

The self-report survey data from these four instruments were used to compile a profile for each of the case study participants and, as such, provided very concise yet basic data about the central phenomena in this study. As noted above, a comparison of each participant's self-report surveys assisted in determining whether any changes in stress, emotion regulation, and emotional exhaustion appeared to be associated with changes in mindfulness over time. In this way, the self-report survey data were used to inform and enrich the analysis of the qualitative data described in the following section.

3.7.2 Qualitative data analysis

Thematic coding

The qualitative data (collected in the form of interviews and journal reflections) were analysed through an iterative cycle of deductive and inductive thematic coding. Braun and Clarke's description of thematic analysis was adopted due to its straightforward approach, which consists of the following six stages: (1) familiarisation with the data, (2) generation of initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report (Braun & Clarke, 2006). Following this approach, the research data were searched for patterns of meaning.

Familiarisation with data

Familiarisation with the data was conducted by gathering questionnaire data, reading through participant journal reflections and listening to audio recordings of participant interviews. Transcription of both interview recordings and handwritten journal reflections also reinforced the researcher's familiarisation with the data. Preliminary ideas and questions were noted at this stage.

Generation of codes

The second stage of analysis involved generation of initial thematic codes. This stage of the analysis involved both deductive (or theory-driven) and inductive (or data-driven) approaches to the data.

Deductive thematic analysis

The deductive thematic analysis was guided by the study's theoretical framework and the literature review. The themes derived from Gross' process model of emotion regulation (2008) included a search for themes of attention deployment, cognitive reappraisal and suppression. Additional themes derived from the literature included emotional exhaustion, stress and mindfulness. The deductive analysis of the qualitative data was cross-referenced against the questionnaire data (measuring stress, emotional exhaustion, mindfulness and emotion regulation ability) to determine the nature of any changes which took place over time in relation to these factors.

Inductive thematic analysis

The inductive approach to thematic analysis was driven by the data itself. As a result, the inductive analysis identified themes which, at times, bore little relationship to the themes which guided the deductive analytical process. By retaining an attitude of openness to the data, the inductive approach resembled the underlying principles of mindfulness, in that both processes operated from an attitude of receptive non-judgmental awareness. Thus, this analytical process mirrored the central phenomenon of the study and created an alignment between content and process.

An iterative approach

The analytical process moved between both deductive and inductive approaches, as dictated by the data. The adoption of this iterative approach, between deductive and inductive coding, created deeper understanding over time. This dialectical approach to the data was informed by a hermeneutic approach which makes meaning through interpretation of the data based on a dialogue between the various aspects of the data separately and, simultaneously, as a whole (Philosophical Hermeneutics, 2007).

Initial analysis – the individual participants

The analysis of data was performed manually and involved searching through the transcripts of each participant's interview data and journal reflections for

responses related to the research questions. While the search for data was guided by the research questions, particular attention was paid to searching for comments related to the codes associated with the theoretical framework and other aspects of the literature review.

The initial phase of data analysis included both deductive and inductive coding, with responses to research question 1 resulting in a primarily deductive approach to coding, informed by themes of emotion regulation, mindfulness, stress and emotional exhaustion. Questionnaire results were also used to inform the qualitative data collected for each participant in relation to research question 1, either by confirming the qualitative data or by raising anomalous or inconsistent data. The rationale behind collecting and analysing different types of empirical data, thus, was that the strengths of one form of data would operate to counteract the deficiencies of other forms of data; so, while the results from the self-report questionnaires did not have statistical significance, they informed the outcomes experienced by the participants and added detail to the case study.

While data related to research question 1 was primarily deductive or theory-driven, by way of contrast, research questions 2 and 3 allowed for a more inductive response to the data. This inductive approach was encouraged due to the broad, open-ended nature of these questions. In response to these questions, data related to the participants' subjective experiences of the mindfulness intervention, including any barriers to practice which they experienced, were collected at this stage.

The results of this initial generation of codes were compiled in a tabular format for each participant, with comments derived from questionnaires, journal reflections and interview responses sorted in relation to each of the three research questions. The results from this initial search are reported in Chapter 4 under each participant's individual sub-section. In-text references provide information as to the source of the reference (e.g. participant 1 is P1, journal reflections are 'J' and interview responses are 'I').

Second round analysis – the collective experience

Once the initial round of coding was completed, individual participant comments were collated and organised into themes to provide a thematic analysis of the collective experience of the participants. This process aligns with Braun and

Clarke's (2006) third, fourth and fifth stages of analysis: searching for, reviewing and defining themes which emerge from the initial codes. Themes which emerged from this sorting process included: the various categories of benefits stemming from practice, modes of practising mindfulness, barriers to practice, factors which were supportive of practice, future intentions for practice, and the usefulness of mindfulness as a form of professional development. As part of this process, both deductive and inductive thematic analysis were employed. Themes related to the theoretical framework and literature review emerged as part of the deductive coding process. However, many of the themes which emerged were driven by the data itself through an inductive process, including a number of unforeseen themes. Notable amongst these unforeseen themes were the various modes of practising mindfulness which participants employed and differences in personal and professional outcomes experienced by the participants. The themes which emerged from this inductive process of analysis became the basis for the discussion sub-sections reported in Chapter 5.

Questionnaire data were used once again to inform this stage of analysis, either by confirming the qualitative data or by raising anomalous or inconsistent data. Thus, by cross-referencing different forms of data, the themes which emerged were multi-dimensional and interconnected. In addition, by collating the multiple perspectives of individual participants, a rich case study unfolded, providing insight into the potential role of mindfulness for the emotional work of alternative school teachers.

Researcher reflexivity

The analysis was constructed in a way which gives voice to the participants and comprehensively reveals the data to the reader. However, it is acknowledged that the researcher's background cannot help but influence the research project. Thus, as part of the analytical process, it was necessary to adopt a position of transparency by making explicit the researcher's status and values which, undoubtedly, contributed to the analytical process. This was potentially compounded in the current study; transitioning between the roles of researcher and mindfulness facilitator undoubtedly informed both the research and facilitation of the intervention, as the two roles became entwined. As such, the principal researcher acknowledges that the role of researcher was informed by her personal background and interest in mindfulness practices.

Furthermore, it is acknowledged that the voice of the researcher, in combination with the participants' voices, is evident in the analysis of the data. However, as Mertens argues, "from an epistemological point of view the inquirer and inquired into are interlocked in an interactive process, each influenc(ing) the other" (1998, p. 184). Thus, this approach is in alignment with this type of qualitative study. Moreover, this approach is considered to be a strength of the current study, allowing the researcher, as mindfulness facilitator, closer interaction with the participants' experiences of the mindfulness intervention, enabling the researcher to bring her voice, as an experienced mindfulness practitioner, to the analysis of those experiences. Without this personal background, some of the subtle intricacies which emerged in the analysis and discussion which follow may have been overlooked.

Despite the advantages of retaining the voice of the researcher as practitioner in the study's analysis, a number of safeguards were implemented in order to retain some degree of objectivity. As previously mentioned, an independent interviewer was engaged in order to encourage participants to fully disclose their experiences of the mindfulness intervention, thereby lending objectivity to the data collection process. In addition, the process of analysis was conducted with a mindful awareness of researcher biases and preconceptions which may have been at work in the current study. Due to the researcher's personal connection with mindfulness, she was acutely aware of seeking out anecdotal evidence in support of the value of mindfulness. In order to counteract this potential bias, she also engaged in a deliberate and thorough search for divergent data, or disconfirming participant data, which countered this inherent bias and, in so doing, presented a balanced analysis of participant experiences.

3.8 ETHICS

3.8.1 Overview

The research project was granted ethical clearance by both QUT's Office of Research Ethics and Integrity and also by the flexi-school's own ethics review board. Informed consent was obtained prior to data collection and participants retained the option to withdraw from participation at any time prior to publication.

3.8.2 Risk of inconvenience

The research was evaluated as carrying a low risk of potential harm to participants, which included the possibility of inconvenience as a result of participating in the project. This risk was managed cooperatively by the school and the research team.

3.8.3 Risk of low level discomfort or anxiety

Low level discomfort and anxiety were additional risks posed by the research. This possibility was addressed, in part, by using an experienced instructor to deliver the intervention. As outlined in section 3.6.3, the instructor was also the principal researcher and, prior to facilitating the training, had a range of experience relevant to fulfilling this role, both as a mindfulness practitioner and as an educator. As such, while this approach somewhat blurred the lines between the roles of researcher and facilitator, it was considered to be a practical and viable alternative to employing another facilitator.

The research also recognised the possibility of discomfort or anxiety being induced by data collection procedures. This possibility was mitigated, in part, by engaging an experienced interviewer solely for the purpose of conducting interviews. The research design also included a protocol for providing participants with access to a counselling service in the event of anxiety or distress.

3.8.4 Confidentiality and privacy

Confidentiality and privacy were maintained through de-identification of data which was then stored on QUT's secure data server.

Chapter 4: Results

Chapter 4 details the results of this study. Section 4.1 provides a summary of the study's questionnaire results, comparing the participants' pre- and post-intervention results on measures of stress, emotional exhaustion, emotion regulation ability and mindfulness. Sections 4.2 to 4.5 then provide details of individual results for participants who completed all aspects of the research, which included attending at least four of six intervention sessions, pre- and post-intervention questionnaires and post-intervention interviews. Individual participant results have been structured in order to address the specific research questions of the study:

1. What are teachers' mindfulness, emotion regulation, emotional exhaustion and stress levels pre- and post- a mindfulness intervention?
2. How do teachers perceive the impact of a mindfulness-based intervention as a strategy to manage stress and support the emotional work of teaching?
3. What are the perceived barriers to mindfulness practice?

4.1 SUMMARY OF RESULTS

Collated questionnaire data for each participant can be seen in Table 4.1. This table details individual participant scores, before (T_1) and after (T_2) (where applicable) mindfulness intervention, for:

- the stress sub-scale of the Depression Anxiety Stress Scale (DASS);
- the emotional exhaustion sub-scale of the Maslach Burnout Inventory (MBI);
- the reappraisal factor of the Emotion Regulation Questionnaire (ERQ) (which is generally regarded as an adaptive form of emotion regulation so *increases* in reappraisal scores are considered to be positive);
- the suppression factor of the ERQ (which is generally regarded as less adaptive, so *decreases* in suppression are considered to be positive);
- the overall mindfulness score for the Five Facet Mindfulness Questionnaire (FFMQ).

Table 4.1 *Questionnaire data before (T₁) and after (T₂) mindfulness intervention*

	Gender	Sessions attended	DASS (Stress)		MBI (Emotional exhaustion)		ERQ (Positive emotion regulation - reappraisal)		ERQ (Negative emotion regulation - suppression)		FFMQ (Mindfulness)	
			T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂
		Total /6	T₁	T₂	T₁	T₂	T₁	T₂	T₁	T₂	T₁	T₂
Participant 1	F	6	16	6	23	12	6	6	3.5	4.5	132	165
Participant 2	F	5	16	14	9	5	5.5	6.7	2.3	2.3	151	165
Participant 3	M	5	20	10	34	17	5.3	6.5	4.5	1.5	151	174
Participant 4	M	4	14	4	11	11	6	6.2	2	1.5	154	162
Participant 5	F	5	10	-	4	-	7	-	3.3	-	140	-
Participant 6	F	3	40	-	35	-	4.2	-	2.5	-	126	-
Participant 7	M	0	4	-	3	-	5.5	-	3.3	-	137	-

Table 4.2 *Published normative data for measures taken in this study*

DASS (stress) – severity ratings		MBI (emotional exhaustion) - range of experienced burnout		ERQ (reappraisal and suppression) - overall means by gender		FFMQ (mindfulness) – overall means in demographically-similar samples		
Normal	0-14	Low (lower third)	≤ 16		<i>Reappraisal</i>	<i>Suppression</i>	<i>Non-meditators</i>	<i>Regular meditators</i>
Mild	15-18	Average (middle third)	17-26	<i>Men</i>	4.60	3.64	137.32	150.02
Moderate	19-25	High (upper third)	≥ 27	<i>Women</i>	4.61	3.14		
Severe	26-33							
Extremely Severe	34+							

Note. Normative data for DASS from Lovibond & Lovibond (1995), for MBI from Maslach, Jackson & Leiter (1996) [Adapted from *Maslach Burnout Inventory Manual* (3rd ed.), by Maslach, C., Jackson, S. E., & Leiter, M. P. Reproduction by special permission of the Publisher, Mind Garden, Inc., www.mindgarden.com. Further Reproduction is prohibited without the Publisher's written consent.], for ERQ from Gross & John (2003) and for FFMQ from Baer et al. (2008).

The information in Table 4.1 was compared to published norms in order to assess the level of each participant's stress, emotional exhaustion, emotion regulation ability and mindfulness scores. Table 4.2 is a compilation of published norms for each of the measures assessed in this study and includes:

- severity ratings ranging for the DASS stress subscale, ranging from normal to extremely severe, as reported in the DASS Manual (Lovibond & Lovibond, 1995, p. 26).
- the range of experienced burnout for teachers on the MBI emotional exhaustion sub-scale, as reported in the MBI Manual (Maslach, Jackson, & Leiter, 1996, p. 6).
- overall means for two common emotion regulation strategies, cognitive reappraisal and suppression, as reported by Gross and John in their 2003 study on the process model of emotion regulation (Gross & John, 2003, p. 352). In their study, gender was found to have no consistent impact on reappraisal but did impact upon suppression. These gender differences were taken into consideration in the current study.
- overall mindfulness means for demographically-similar meditators and non-meditators, as reported in a study which assessed the construct validity of the FFMQ (Baer et al., 2008). The rationale for including means for these two samples was discussed in Section 3.7.1. It should be noted that, while the overall mindfulness mean was not reported in the abovementioned study (Baer et al., 2008), this figure has been calculated by combining the means for each of the reported facets (see Table 4.4 below).

Overall results for the current participants on each of the measures – for stress, emotional exhaustion, emotion regulation ability and mindfulness - are summarised below in sections 4.1.1 to 4.1.4.

4.1.1 Stress (DASS)

As seen in Table 4.1, the participants' scores on the stress sub-scale of the DASS ranged from 4 to 40 at T₁. Thus, according to published severity ratings (see Table 4.2), participants in the current study experienced a wide variance in stress levels prior to the mindfulness intervention, ranging from normal to extremely

severe. Prior to the intervention, three participants experienced *normal* levels of stress (scoring 4, 10 and 14); of these three participants, one did not attend any of the intervention sessions, one attended five of the six sessions but did not complete the post-intervention questionnaire, and one completed four of the six sessions and also completed the post-intervention questionnaire. The participant who had experienced normal stress pre-intervention, *and* completed all components of the study, scored substantially lower within the normal range, thus indicating reduced stress levels (moving from 14 to 4). Two of the participants experienced *mild* levels of stress prior to the intervention (scoring 16); both of these participants completed minimum intervention requirements (attending five and six sessions respectively), including the post-intervention questionnaire. Both of these participants scored within the normal range post-intervention (moving from 16 to 6, and 16 to 14 respectively). One of the participants experienced *moderate* levels of stress prior to the intervention (scoring 20), attended five of the six sessions and completed the post-intervention questionnaire. This participant scored within the normal range post-intervention (moving from 20 to 10). The final participant experienced *extremely severe* stress prior to the intervention (scoring 40); this participant attended three of the six intervention sessions and was not considered to have completed minimum attendance requirements (for which a minimum of four sessions needed to be attended) and therefore did not complete the post-intervention questionnaire.

Thus, for each of the four participants who attended the required number of training sessions and completed the post-intervention questionnaire, a definite trend was observed towards reduced stress levels after completion of the mindfulness intervention. The overall trend towards reduced stress levels post-intervention is illustrated in Figure 4.1.

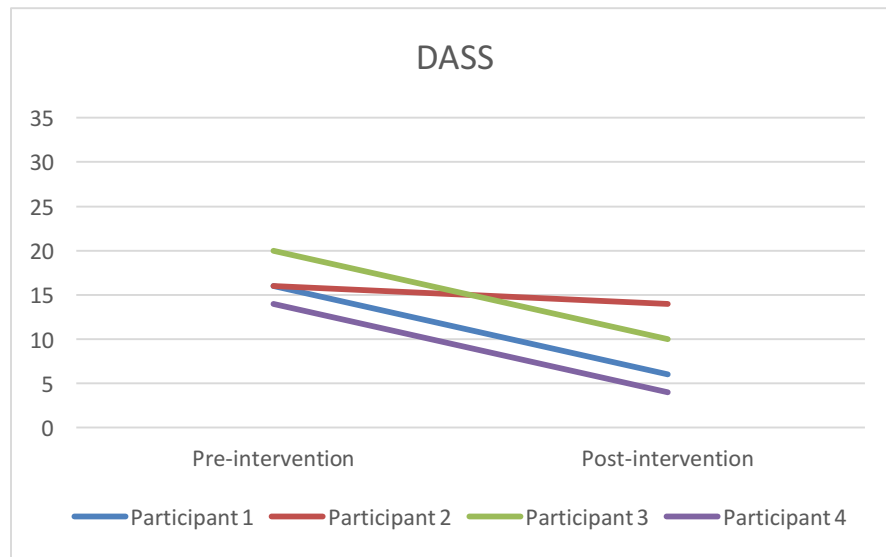


Figure 4.1 Participant stress levels pre- and post-intervention

4.1.2 Emotional Exhaustion (MBI)

As seen in Table 4.1, at T₁, the participants' scores on the emotional exhaustion sub-scale of the MBI ranged from 3 to 35. According to published ranges of emotional exhaustion for teachers (see Table 4.2), this reveals a wide variance in range of experienced emotional exhaustion prior to the mindfulness intervention, ranging from low to high. Four participants experienced *low* levels of emotional exhaustion pre-intervention (scoring 3, 4, 9 and 11); of these three participants, one did not attend any of the intervention sessions, one attended five of the six sessions but did not complete the post-intervention questionnaire, two fulfilled the minimum requirements to be considered to have completed the intervention (attending four and five sessions respectively) and also completed the post-intervention questionnaire. Of the participants who completed all components of the study, one of these participants scored lower within the low range, indicating reduced emotional exhaustion levels (moving from 9 to 5), while the other participant maintained the same score post-intervention (11). Prior to the intervention, one participant experienced *average* levels of emotional exhaustion (scoring 23); this participant attended all sessions and completed the post-intervention questionnaire, scoring within the low range post-intervention (moving from 23 to 12). Two of the participants experienced *high* levels of emotional exhaustion pre-intervention (scoring 34 and 35 respectively); one of these participants attended five of the six sessions and completed the post-

intervention questionnaire. This participant scored within the average range post-intervention (moving from 34 to 17). The other participant who scored high on emotional exhaustion was not considered to have completed the intervention and therefore did not complete the post-intervention questionnaire.

Thus, for each of the four participants who completed all intervention requirements, including the post-intervention questionnaire, a general reduction was observed in emotional exhaustion levels after completion of the mindfulness intervention. The overall trend towards reduced emotional exhaustion levels post-intervention is illustrated in Figure 4.2.

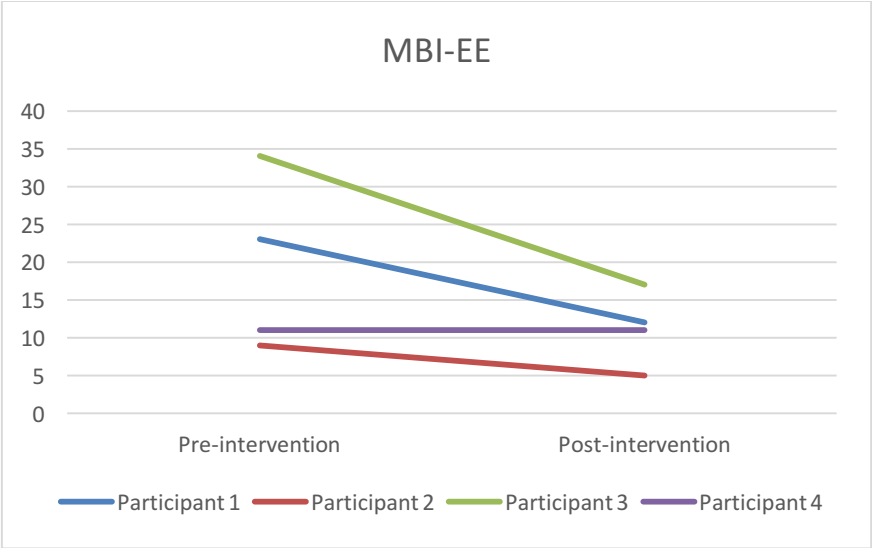


Figure 4.2 Participant emotional exhaustion levels pre- and post-intervention

4.1.3 Emotion Regulation Ability (ERQ)

Reappraisal

As seen in Table 4.1, the participants’ scores on the reappraisal factor of the ERQ ranged from 4.2 to 7 at T₁. According to reported means (Table 4.2), six of seven participants in the current study scored above average in terms of their use of cognitive reappraisal as an emotion regulation strategy prior to the mindfulness intervention (ranging from 5.3 to 7). The final participant scored just below average in terms of the use of cognitive reappraisal as an emotion regulation strategy (scoring 4.2); this particular participant attended 3 of the 6 intervention sessions and was not

considered to have completed the intervention and therefore did not complete the post-intervention questionnaire.

For each of the 4 participants who completed all intervention requirements, including the post-intervention questionnaire, a slight trend was observed towards increased use of cognitive reappraisal as an emotion regulation strategy after completion of the mindfulness intervention. Three participants increased their score on this factor (moving from 5.5 to 6.7, 5.3 to 6.5, and 6 to 6.2 respectively), while the fourth participant maintained their pre-intervention score (6). The overall trend towards a slight increase in the use of cognitive reappraisal as an emotion regulation strategy post-intervention is illustrated in Figure 4.3. Reappraisal is generally regarded as an adaptive form of emotion regulation so *increases* in reappraisal scores are considered to be positive.

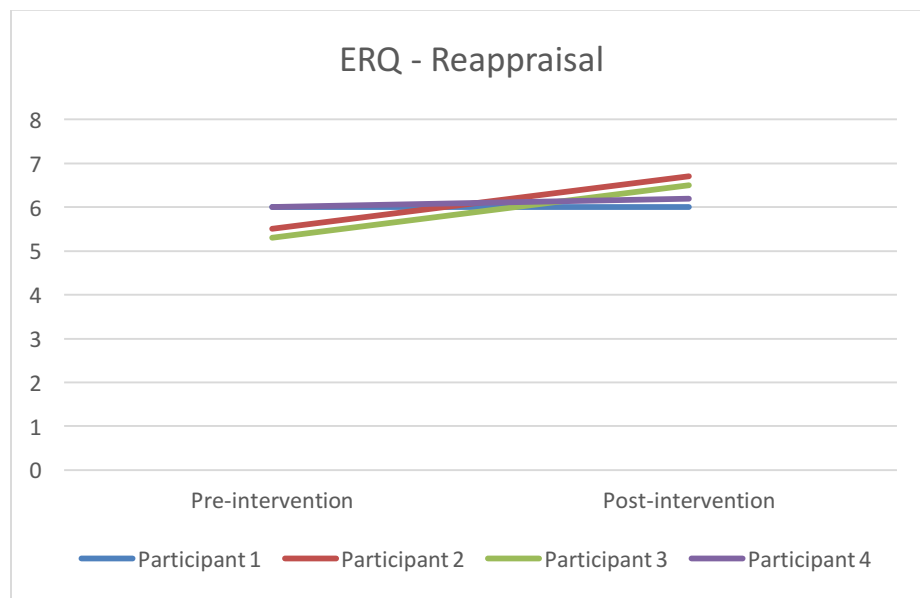


Figure 4.3 Participant reappraisal levels pre- and post-intervention

Suppression

As seen in Table 4.1, participants' scores on the suppression factor of the ERQ ranged from 2 to 4.5 at T₁. As noted above, Table 4.2 shows overall means for two common emotion regulation strategies, cognitive reappraisal and suppression.

According to the reported means, three of the participants in the current study experienced suppression levels greater than the mean for their gender prior to the

mindfulness intervention. The remaining four participants experienced suppression levels lower than the mean for their gender.

There was no overall trend observed in relation to suppression levels after completion of the intervention. One participant who had demonstrated greater than average suppression levels pre-intervention scored higher on suppression levels post-intervention (moving from 3.5 to 4.5). One participant maintained their pre-intervention score of 2.3 (lower than average suppression levels) post-intervention. Both male participants who had completed the intervention requirements, including the post-intervention questionnaire, demonstrated reduced use of suppression after the intervention; one moved from a greater than average suppression level of 4.5 to a lower than average level of 1.5, while the other demonstrated a slight reduction in less than average levels from 2 to 1.5. The overall movement in relation to suppression levels from pre- to post-intervention is illustrated in Figure 4. Suppression is generally regarded as a less adaptive emotion regulation strategy, so *decreases* in suppression are considered to be positive.

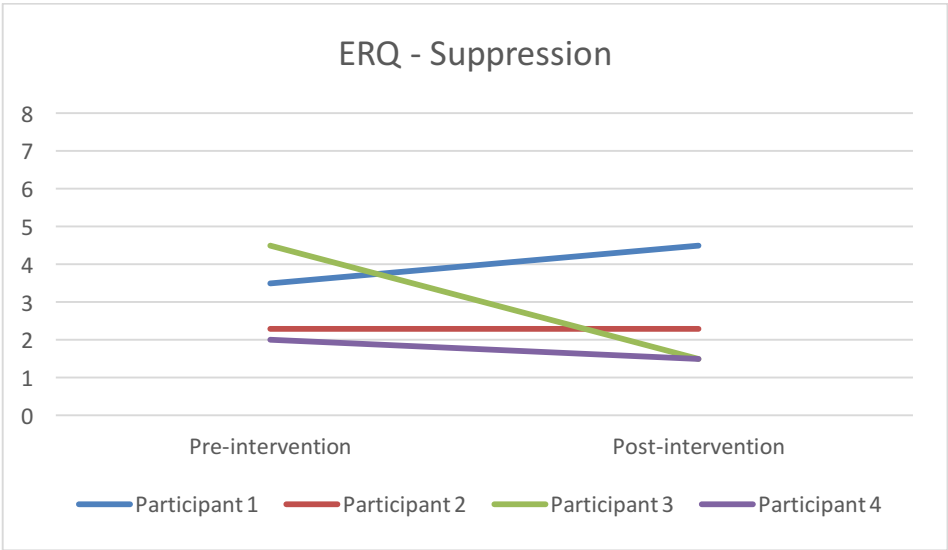


Figure 4.4 Participant suppression levels pre- and post-intervention

4.1.4 Mindfulness (FFMQ)

As seen in Table 4.1, the participants' total scores on the Five Facet Mindfulness Questionnaire (FFMQ) ranged from 126 to 154 at T₁. According to reported means (see Table 4.2), almost all participants in the current study

demonstrated mindfulness levels at least equivalent to the reported levels of demographically-similar non-meditators, with three of the participants demonstrating mindfulness levels greater than the mean of the regular meditators sample, prior to the intervention. Two of the participants scored at a level just below the mean for demographically-similar non-meditators.

For each of the four participants who completed all intervention requirements, including the post-intervention questionnaire, a slight to moderate trend was observed towards increased overall mindfulness levels after completion of the intervention. Of these participants, one demonstrated an increase in overall mindfulness levels from a level slightly lower than the mean for demographically-similar non-meditators to a level greater than the mean for regular meditators (moving from 132 to 165). The remaining three participants started from a level greater than the mean for regular meditators and demonstrated an increase in the expected direction (moving from 151 to 165, 151 to 174, and 154 to 162 respectively). As a result, post-intervention, each of the participants demonstrated mindfulness levels greater than the reported means for regular meditators. The overall trend towards increased mindfulness levels post-intervention is illustrated in Figure 4.5.

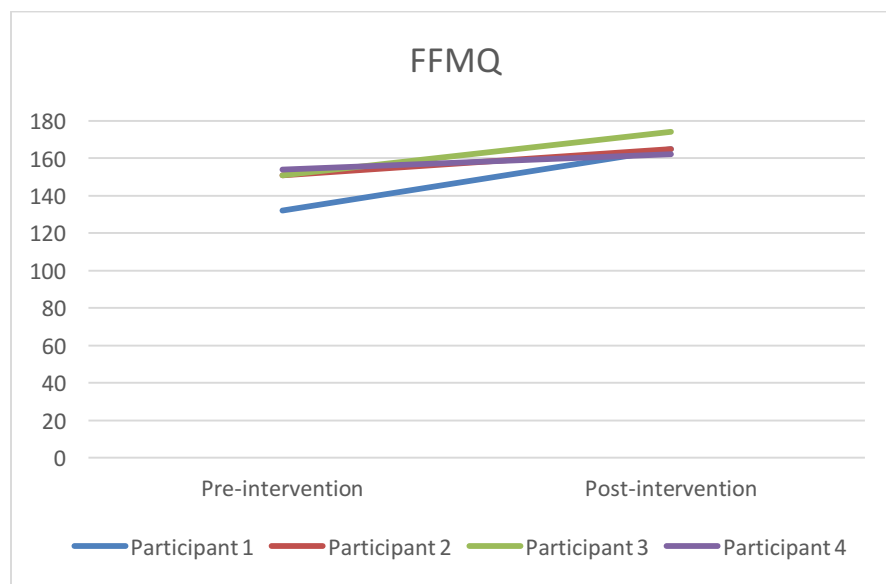


Figure 4.5 Participant mindfulness levels pre- and post-intervention

The results for each of the participants in relation to the individual facets of mindfulness are reported in Table 4.3. For comparative purposes, the published means for each of the individual facets are reported in Table 4.4. A graphic depiction of the overall movement from T₁ to T₂ based on the average scores for each facet is represented in Figure 4.6. This reveals a consistent increase on all facets post-intervention.

Table 4.3 *FFMQ scores by facet for each participant pre- (T₁) and post- (T₂) intervention*

Participant	Total mindfulness		Observing		Describing		Acting with awareness		Non-judging of inner experience		Non-reactivity to inner experience	
	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂
Participant 1	132	165	30	35	31	39	23	27	26	37	22	27
Participant 2	151	165	33	37	28	26	25	30	38	39	27	33
Participant 3	151	174	30	33	37	40	35	40	24	37	25	24
Participant 4	154	162	35	35	31	34	26	30	35	37	27	26
Participant 5	140		33	-	34	-	22	-	23	-	28	-
Participant 6	126		30	-	40	-	15	-	21	-	20	-
Participant 7	137		22	-	33	-	25	-	29	-	28	-

Table 4.4 *Means for mindfulness facets in two demographically-similar samples*

Mindfulness facet	Non-meditators	Regular meditators
Observing	27.04	31.96
Describing	30.01	31.84
Acting with awareness	28.32	28.08
Non-judging of inner experience	29.13	32.44
Non-reactivity to inner experience	22.82	25.70
OVERALL MINDFULNESS	137.32	150.02

Note: Adapted from *Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Non-Meditating Samples*, by Baer, R. A. et al. Copyright 2008 by Sage Publications.

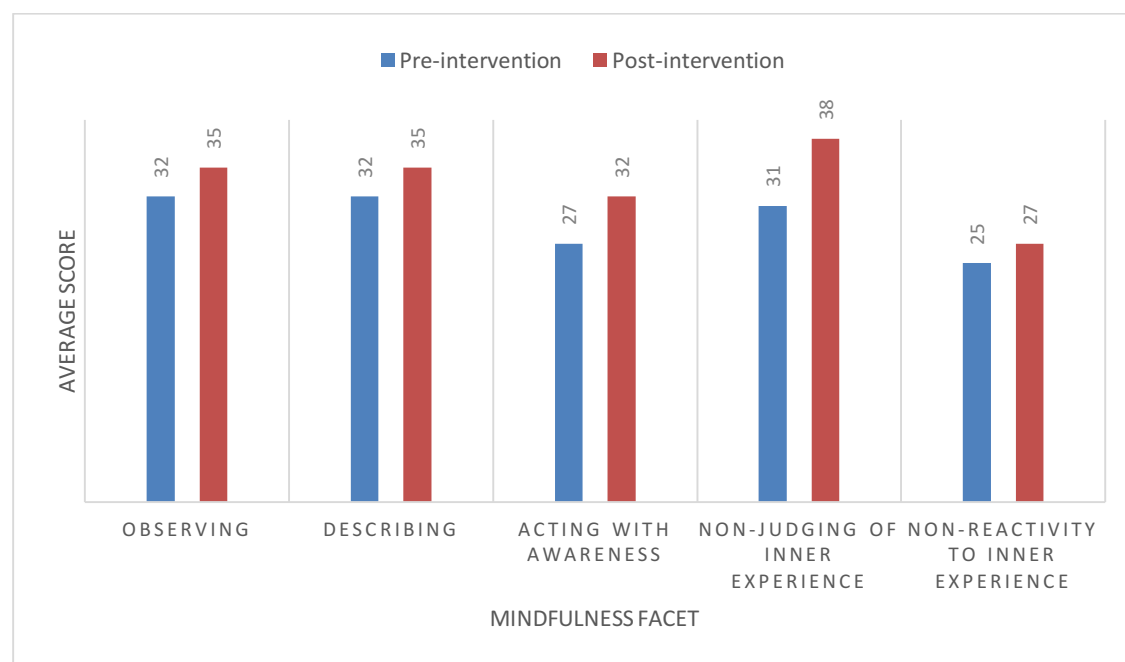


Figure 4.6 Average mindfulness levels by facet pre- and post-intervention for participants 1-4

Sections 4.2 to 4.5 provide detailed results for each of the individual participants who completed all intervention requirements. These results are structured under sub-headings which clearly address the specific research questions of the study.

4.2 PARTICIPANT 1

Participant 1 was a 42 year old female qualified teacher with seven years of teaching experience. Her exposure to mindfulness prior to the intervention was minimal, which she explained was limited to a couple of introductory meditation sessions (I). During her interview, she categorised the emotional demands of her job as “quite high”, describing the needs of the young people who attend the school as “high level”: “There can be tears and bravado and extreme anxiety all in one day from different people and (as a result) it can often be hard to manage your time.” (I) This participant attended all six intervention sessions. She struggled to commit to a home practice of formal mindfulness techniques, explaining that: “I never did a full half hour or 20 minutes, not even once. I just didn’t manage it. I tried and it would go for a few minutes and then maybe I’d get frustrated in my struggle to meditate or if it was enough time I’d fall asleep.” (I) However, she practised informal mindfulness practices almost daily, bringing her full attention to tasks such as driving or “being aware of the sky or the cats enjoying the grass...just being at one with the universe...lots more of those littler moments” (I). She described this approach as “a more mindful approach to living with little breaks in the hurly-burly of life” (I).

4.2.1 Stress

Despite her lack of formal practice, this participant’s questionnaire responses (see Table 4.5) revealed a clear reduction in stress levels from T₁ to T₂, shifting from mild stress (16) pre-intervention to normal stress levels (6) post-intervention. This shift in stress levels was also identified by the participant in her interview responses. She noted that, post-intervention, the external stressors in her life had increased when compared to pre-intervention stressors, yet her stress levels seemed to have decreased. In support of this, she noted that she was “able to step back a bit ... and see (stressful events) in the grand scheme of the world” (I). She laughingly qualified

this statement, noting that she was “still pretty swept up (in stressful events in her life) but (that she has) moments of peace...because of (her) new learning.” (I)

Table 4.5 *Participant 1 pre- and post-intervention questionnaire results*

	Sessions attended (Total /6)	DASS (Stress)		MBI (Emotional Exhaustion)		ERQ (Positive Emotion Regulation - Reappraisal)		ERQ (Negative Emotion Regulation - Suppression)		FFMQ (Mindfulness)	
		T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂
Participant 1	6	16	6	23	12	6	6	3.5	4.5	132	165

4.2.2 Emotional exhaustion

Participant 1’s emotional exhaustion levels also decreased noticeably from pre- to post-intervention, shifting from the average range of experienced burnout (23) to the low range of experienced burnout (12). Her questionnaire scores are supported by both her journal entries and interview responses. Her journal entry for the final intervention session noted that she had observed changes in coping with emotionally challenging situations over the course of the intervention. During her interview, she described her post-intervention emotional state as more relaxed and like “being on more of an even keel” (I). This participant also commented that she had noticed her partner (a co-participant in the course) becoming “much more steady emotionally” and that this seemed to have a positive “cross-over” effect for both of them (I).

4.2.3 Emotion regulation ability

In terms of emotion regulation ability, participant 1’s baseline reappraisal scores were above average when compared with the mean overall score for women. Her pre-intervention score (6) was maintained at post-intervention (6). Unexpectedly, however, her suppression score increased from 3.5 to 4.5 between pre- and post-intervention. Her pre-intervention suppression score was slightly higher than the overall mean for women and this was amplified at post-intervention.

Participant 1’s interview responses provide evidence of a subjective experience of change in emotion regulation ability over the course of the research intervention. When asked whether she had noticed any difference in the way she deals with interactions with others, she responded that she had noticed positive changes in both personal and professional aspects of her life. She described an increased ability to “move on more quickly”, increased compassion for others and an increased ability to detach from intense emotional exchanges in the moment and “not take it so personally” (I). She was careful to qualify that these qualities were pre-existing

tendencies for her, which is supported by above average reappraisal scores both pre- and post-intervention; however, she noted an increased ability to detach and act with compassion after the intervention, drawing upon examples from both her personal life and from the emotional work of teaching in support of her subjective experience: “Again I think it’s being able to move on more quickly, have compassion for them (the young people) and that slight detachment of being in the moment but just thinking, ‘Ah, this person’s just very angry at the moment, they’re very upset’ and not take it so personally...just being a little bit more compassionate.” (I)

4.2.4 Mindfulness

Finally, participant 1’s overall mindfulness score increased from a level slightly lower than average for a demographically-similar non-meditator (132) at T₁ to above average for a regular meditator (165) at T₂. Her scores for the five facets of the overall mindfulness score are included in Table 4.6 (with below mean scores marked *). At T₁, participant 1 was above average for observing and describing but below average for acting with awareness, non-judging of inner experience and non-reactivity to inner experience (when compared to the means for demographically-similar non-meditators). At T₂, her scores were above average on all facets except acting with awareness when compared to the means for both demographically-similar non-meditators and regular meditators. For the purposes of comparison, means for the five facets for both demographically-similar non-meditators and regular meditators are provided in the same table.

Table 4.6 *Participant 1 pre- and post-intervention FFMQ results, with normative data*

PARTICIPANT 1	T1	T2	Non-meditators	Regular meditators
Observing	30	35	27.04	31.96
Describing	31	39	30.01	31.84
Acting with awareness	23*	27*	28.32	28.08
Non-judging on inner experience	26*	37	29.13	32.44
Non-reactivity to inner experience	22*	27	22.82	25.70

Note: Normative data adapted from *Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Non-Meditating Samples*, by Baer, R. A. et al. Copyright 2008 by Sage Publications.

Participant 1 also identified an increased subjective experience of mindfulness in her interview responses. She observed that an increased sense of mindfulness assisted her in rapidly activating compassion, detachment and acceptance in the moment. She described her experience of mindfulness as “like putting balm on a wound” when triggered by stressful situations, and like stepping into “a mode of

appreciation” when activated by moments of beauty in life, such as seeing a beautiful sky (I). She also described her experience of mindfulness as a “sort of double thinking” or meta-awareness, where “you’re aware of what you’re aware of...(able to) detach a little and...float above it a little and see it” (I).

4.2.5 General perceptions

Despite her limited formal mindfulness practice, this participant asserted that she was convinced of the benefits of mindfulness. Within the context of work, she noted that she had been using mindfulness to deal with stressful interactions with the young people at the school, “sometimes in the very moment and other times a short while after to help...think about it in a more relaxed way” (J). However, she identified more benefits in her personal life than in her professional life, noting that she had become “less blaming”, less likely to “slip too low”, more calm and capable, more detached and more accepting of things as they are (J). She also found that bringing a sense of curiosity to challenging feelings was “soothing” during stressful times (J).

In addition, this participant looked forward to the intervention sessions themselves. She noted that, while school staff had many after-school commitments, the intervention was not an imposing commitment, describing it as “a pleasurable one...with benefits...immediately afterwards...that evening or the very next morning I’d feel a bit light.” (I)

While a sense of “lightness” was pleasurable for this participant - “it is lovely to just stop and breathe and be right in the moment” (I) - it was the “mind-shifts” which she experienced as a result of the intervention which were most transformative for her: “Each week had a different concept so I think that, for me, was most helpful...those mini-lessons... learning to approach things differently.” (I) Outlining one of the shifts which had taken place for her, she described herself as “more of a black and white thinker” (I) prior to the intervention, but noted that she had developed a greater sense of perspective as a result of the intervention and was less likely to catastrophise or make sweeping generalisations about difficult moments in either her personal or professional life. Underlining this shift, the principal learning identified by this participant as a result of the intervention was the importance of compassion for self and others.

4.2.6 Barriers

Despite the benefits experienced by this participant, she identified a number of barriers to developing a formal mindfulness practice. An underlying theme in both her journal reflections and interview responses was a sense of resistance to meeting her own needs and putting off what she sensed would benefit her. She commented: “It is funny how I can rebel from or put off what I know would benefit me...Sometimes I don’t meet my own needs...I need to remember to keep being mindful of my own needs.” (I) On a more pragmatic level, she struggled with the actual meditation process, finding it difficult to remain anchored in the present moment without letting her mind “just wander off” (I). She also noted that she found it difficult to prioritise a mindfulness practice amidst the competing demands of daily life: “wanting to look at magazines, wanting to look at blogs, wanting to be inspired creatively and thinking, ‘I don’t want to stop that right now’, or...making dinner, all of those things were barriers.” (I) She related her lack of commitment to the fact that the intervention sessions were part of the current research project: “I guess it came...well, not unexpectedly...we knew that (the course) was going to happen, but you know how sometimes you make a commitment and you plan for something and you think, ‘Right, I’m going to start yoga’ and you do it because you’ve made that decision, but...because the study just sort of happened...I hadn’t made a strong resolve (to engage in the practice).” (I)

Ultimately, however, this participant told a story of the perceived importance of mindfulness for her future, perhaps epitomised in her comment that she “inten(ded)...to keep revisiting mindfulness for the rest of (her) life.” (J) Prior to the intervention, she had “dabbled” with meditation and the idea that “it could be an important thing” (I). As a result, she found that she was making connections with the course concepts on a deep level and developing an awareness that she would like to incorporate associated ideas and practices into her daily life, saying: “Now it’s entered my little universe I will keep increasing how I think about it...my consideration of its importance and how I should factor it in.” (I) However, another message was also conveyed through this participant’s story; this was a sense that finding the time to create a regular meditation practice was something that she had not yet managed, alongside a recognition that it could be “an ongoing battle...trying to prioritise it in the rest of what (she fits) into life.” (I)

4.3 PARTICIPANT 2

Participant 2 was a 62 year old female qualified teacher with 16 years of teaching experience. Prior to the intervention, she had developed a solid understanding of mindfulness having completed the full eight week MBSR (Mindfulness Based Stress Reduction) course in the previous calendar year. She described the emotional demands of her job as variable from day to day but conceded that they could reach “substantial heights” (I), adding that, because of her age, she needed to take care of herself. This participant attended five of the six intervention sessions, missing one session due to illness. During her interview, she estimated that she engaged in formal mindfulness practices approximately 10-15 minutes per day throughout the duration of the mindfulness program and used brief mindfulness practices, such as a quick body scan or breath awareness, quite frequently. Her formal practice varied from day to day. On some days she would do a half hour body scan or mindful movement practice while on other days she would only be able to practise a few minutes of breath awareness at school or, alternatively, would engage in an everyday activity, such as eating mindfully. She stressed that, although she had previously been introduced to the process of mindfulness, it had yet to become a habit.

4.3.1 Stress

Participant 2's questionnaire responses (see Table 4.7) revealed a slight reduction in stress levels from T₁ to T₂; this slight reduction shifted her DASS severity rating from mild stress (16) pre-intervention to normal stress levels (14) post-intervention. This shift in stress levels was also identified by the participant in her interview responses where she suggested that her stress levels had changed because she was more aware of the early signals of stress and was able to intervene before stress had an opportunity to build up. She also commented that she had noticed that she was less reactive than previously and this seemed to allow stress to dissipate. In particular, she observed that she had noticed more beneficial effects at home, rather than at school. She attributed this to the fact that she had previously noticed the intrusion of work-related stresses into her home life but now she was “not carrying the stress of the day as much” (I).

Table 4.7 Participant 2 pre- and post-intervention questionnaire results

	Sessions attended (Total /6)	DASS (Stress)		MBI (Emotional Exhaustion)		ERQ (Positive Emotion Regulation - Reappraisal)		ERQ (Negative Emotion Regulation - Suppression)		FFMQ (Mindfulness)	
		T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂
Participant 2	5	16	14	9	5	5.5	6.7	2.3	2.3	151	165

4.3.2 Emotional exhaustion

Participant 2’s emotional exhaustion levels also decreased somewhat from pre- to post-intervention. Her baseline emotional exhaustion levels were already in the low range of experienced burnout; she maintained a low level of experienced burnout improving slightly within this range with a score shift from 9 to 5. Her questionnaire scores are supported by her interview responses in which she noted that, although she was not generally prone to “enormous ups and downs”, she had noticed that she was able to manage “a lot better” with the stressors of school over the course of the mindfulness intervention (I). She also commented that her growing sense of acceptance about things seems to have resulted in a more “even” emotional state in general (I). This sense of acceptance also had an interesting effect on her energy levels in that, although she was not necessarily less tired, she was less stressed about being tired and that seemed to allow the tiredness to dissipate more easily.

4.3.3 Emotion regulation ability

In terms of emotion regulation ability, participant 2’s baseline reappraisal scores were above average when compared with the mean overall score for women. Her pre-intervention score (5.5) increased noticeably at post-intervention (6.7). Her baseline suppression score pre-intervention was well below average for women and this score (2.3) was maintained post-intervention. The participant’s questionnaire scores indicate a highly-developed emotion regulation ability. When asked whether she had noticed any difference in the way she deals with interactions with others, particularly in her professional role, she stated that she had not noticed a great deal of difference in interactions with the young people at school. She attributed this to the fact that staff at the school are constantly engaged in reflective practice as part of their role and that, although they had not specifically utilised mindfulness practices prior to this course, they had worked with similar principles which stressed the importance of compassion. As such, the mindfulness practices introduced as part of the intervention did not significantly impact upon emotional interactions amongst the school community. However, in personal situations she noted that she had become

able to cope with difficult interactions in shorter periods of time by focusing on her response rather than staying with or reacting to painful emotions. This distinction is captured in her comment that: “I’m noticing I am more able to let well alone rather than react – this is more in personal situations. It is easier in professional situations.”

(J)

4.3.4 Mindfulness

Finally, participant 2’s baseline mindfulness score was already at a level which was approximately equivalent to a regular meditator (151) at T₁. This score increased to well above average for a regular meditator (165) at T₂. Her scores for the five facets of the overall mindfulness score are included in Table 4.8 (with below mean scores marked *). At T₁, participant 1 was above average for observing, non-judging of inner experience and non-reactivity to inner experience but slightly below average for describing and acting with awareness (when compared to the means for demographically-similar non-meditators). At T₂, her scores were above average on all facets except describing when compared to the means for both demographically-similar non-meditators and regular meditators.

Table 4.8 Participant 2 pre- and post-intervention FFMQ results, with normative data

PARTICIPANT 2	T1	T2	Non-meditators	Regular meditators
Observing	33	37	27.04	31.96
Describing	28*	26*	30.01	31.84
Acting with awareness	25*	30	28.32	28.08
Non-judging on inner experience	38	39	29.13	32.44
Non-reactivity to inner experience	27	33	22.82	25.70

Note: Normative data adapted from *Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Non-Meditating Samples*, by Baer, R. A. et al. Copyright 2008 by Sage Publications.

The interview responses of participant 2 also provide support for her increased mindfulness questionnaire score. She commented that, because the intervention had taken place on site, and because the staff had placed “reminders” (referring to the stickers and postcards which were provided to participants as visual reminders to practice) around the school, it was easier to remain mindful: “I don’t have to see one of those little blue (stickers) anymore...but...it’s actually in the space at school now...it’s here.” (I)

4.3.5 General perceptions

Participant 2 commented that, as a professional development tool: “(Mindfulness) is perfect...I think some teachers get to such a point of frustration

that they don't know what to do and some of them can't control their own emotions and it's really sad that teachers...can get into that situation without this kind of support.” (P2:I) She also expressed the belief that the fact that staff were completing the intervention together as peers was one of the main beneficial outcomes of the intervention. She commented that, through this common experience, they would then be able to support each other in times of professional stress: “Doing it at school has really made it present in the workplace.” (I)

She also stressed that an increased body awareness which had developed through her mindfulness practice was fundamental to her sense of greater connection with the external world: “Sensing how I really am in my body...am I crunching my jaw, is my brow knitted...it's like I'm holding myself in and not being open to what's actually going on...I can let that go (and) actually connect more outside my body...with other people...I feel more connected to the universe.” (I) In fact, this participant had an interesting experience in terms of body awareness as she had fallen ill to a virus during the intervention period. She noticed that she had not felt as upset as she normally would when she had been ill in the past; instead, she felt a “sense of calm and (felt as if she was) collaborating with this virus” rather than “los(ing) touch with (her) health...when under attack by some virus.” (J) She commented that the mindfulness had assisted her in finding “patches of energy” and was allowing her to feel more focused and proactive at work. (J)

4.3.6 Barriers

Despite asserting a belief in mindfulness as “such an amazing healing process” (J), she observed that she still sensed a resistance within herself to regular practice, commenting that: “I've only been introduced...properly to the process fairly recently so...I'm not that practised...it has yet to become a habit.” (I) While noting that juggling priorities and “personal disorganization” (I) were significant barriers to practice, she attributed her underlying inner resistance to practice to a sense that she is “not strong enough to live out all (her) beliefs” (J).

4.4 PARTICIPANT 3

Participant 3 was a 51 year old male qualified teacher with 30 years of teaching experience. Prior to the intervention conducted as part of this study, he had a limited understanding of mindfulness, having completed only a few guided sessions using an

online mindfulness application. As the head of campus, responsible for the welfare of both the staff and young people at the school, he described the emotional demands of his job as “extraordinary”: “It’s very difficult. I have to...keep the place running as...a caring positive place...at the same time dealing with...a range of traumatised young people...and care for the staff that are bearing the brunt of that behaviour...That is an emotionally draining thing to do.” (I) This participant attended five of the six intervention sessions, missing one session due to other professional commitments. During his interview, he estimated that he engaged in formal mindfulness practices two or three times per week for 15-20 minutes for the duration of the mindfulness intervention. In addition, he practised walking mindfulness on his journey to work most week days for about 20 minutes. He also noted that he had made use of “momentary” strategies or reminders to come back to the present moment: “I didn’t see the green dot (referring to the reminder stickers placed around the school as part of the intervention) and suddenly stop and do a half-hour mindfulness session but just that moment of reminding myself to be more in the present was really useful for me.” (I)

4.4.1 Stress

Participant 3’s questionnaire responses (Table 4.9) revealed a marked reduction in stress levels from T₁ to T₂, shifting his DASS severity rating from moderate stress (20) pre-intervention to normal stress levels (10) post-intervention.

Table 4.9 Participant 3 pre- and post-intervention questionnaire results

	Sessions attended (Total /6)	DASS (Stress)		MBI (Emotional Exhaustion)		ERQ (Positive Emotion Regulation - Reappraisal)		ERQ (Negative Emotion Regulation - Suppression)		FFMQ (Mindfulness)	
		T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂
Participant 3	5	20	10	34	17	5.3	6.5	4.5	1.5	151	174

This shift in stress levels was also identified by the participant in his interview responses. He observed that, since commencing mindfulness practice, although he still had moments where he was “highly stressed”, he considered that he had “calmed down by an order of magnitude” (I). He noted that, although he still experienced stress, he no longer worried about it as much and was able to see it as “part of (him) rather than being all pervasive” (J). This approach to stress seemed to allow him to “shed stress more quickly and to have a lower baseline of stress in general.” (I) Interestingly, after participant 3 had missed an intervention session, he observed a difference in his mental state due to this lack of an extended practice in the previous

week. Specifically, he noticed that “(he) was unable to bring (his) racing mind under control as swiftly and that it required more conscious effort to achieve this end.” (J)

4.4.2 Emotional exhaustion

Participant 3’s emotional exhaustion levels also decreased noticeably from pre- to post-intervention. His baseline emotional exhaustion levels were initially in the high or upper third range of experienced burnout (34). After the intervention, he scored at the lower end of the average range of experienced burnout (17). Interestingly, his own observations were that his level of emotional exhaustion had probably remained stable, even after the intervention. Despite this observation, he emphasised his ability to disengage from work stressors as a critical factor in the increased sense of happiness which he had experienced over the course of the mindfulness intervention. He observed that his mindfulness practice seemed to “make space” in his life: “I find it very easy in my particular role to get very tightly bound up in the various stories that are going on in the school and that can be difficult in that I can’t find ways...to have an educational impact or I can become a little bit vicariously traumatized myself. So I think that one of the things (I experienced) as a result of doing the mindfulness (was) a little bit of space and perspective...It actually removed the story for a moment so that I was able to re-centre. ...With other strategies...you always remain in relationship to the story or the problem...but in mindfulness I found that...I was separated from it and I found (that) very useful to be able to return to it from a blank space.” (I) As a result, this participant felt that he was able to find some kind of “respite” from the stressful nature of his work so, rather than being fixed in constant problem-solving mode: “I feel as though I am now able to leave that behind. So when I get home tonight I’ll be able to stop and my mind won’t be continually turning that over in my head...I feel more able to relax...to be in a mind space where I’m not actually working, where I’m not trying to resolve a problem.” (I) He also commented on the “clear calming effect” of mindfulness, of feeling “more alert and focused” (J) and the improved quality of his thoughts overall. He seemed to attribute this to the simple discipline of a mindfulness practice: “Probably the thing that I got most out of was the actual doing of it...whether I was good at it or bad at it...the fact that I was doing it...regularly...it was the doing of it, not the practice itself...saying ‘it is valuable for me to spend the next 20 minutes or half an hour not doing anything...I am being

productive by not doing anything’ ...I think that realisation was both very healthy for me personally (and) psychologically but I think...it has (also) improved the quality of my work, if not the quantity.” (I)

4.4.3 Emotion regulation ability

In terms of emotion regulation ability, participant 3’s baseline reappraisal scores were above average when compared with the mean overall score for men. His pre-intervention score (5.3) increased noticeably at post-intervention (6.5). His baseline suppression score pre-intervention was above average for men (4.5) and this score decreased to well below average for men post-intervention (1.5). He reflected in his journal that his ability to use mindfulness to explicitly deal with challenging situations had increased. Likewise, during his interview, he observed that, if he was being “short” with someone, including himself, he had become more able to recognise that in the moment and to decide that “it’s probably time to engage in a bit more mindfulness.” (I)

4.4.4 Mindfulness

Finally, participant 3’s baseline mindfulness score was already at a level which was approximately equivalent to a regular meditator (151) at T₁. This score increased to well above average for a regular meditator (174) at T₂. His scores for the five facets of the overall mindfulness score are included in Table 4.10 (with below mean scores marked *). At T₁, participant 3 was above average for all facets other than non-judging of inner experience when compared to the means for demographically-similar non-meditators. At T₂, his scores were well above average on all facets except non-reactivity to inner experience when compared to the means for both demographically-similar non-meditators and regular meditators. His score for the non-reactivity to inner experience facet remained relatively stable at T₂.

Table 4.10 *Participant 3 pre- and post-intervention FFMQ results, with normative data*

PARTICIPANT 3	T1	T2	Non-meditators	Regular meditators
Observing	30	33	27.04	31.96
Describing	37	40	30.01	31.84
Acting with awareness	35	40	28.32	28.08
Non-judging on inner experience	24*	37	29.13	32.44
Non-reactivity to inner experience	25	24*	22.82	25.70

Note: Normative data adapted from *Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Non-Meditating Samples*, by Baer, R. A. et al. Copyright 2008 by Sage Publications.

The interview responses of participant 3 supported his questionnaire results. He observed that he had become “much better at moving into mindfulness and remaining more focused.” (J) However, he noted that he was still easily distracted but that he was able to recognise when he was not being mindful and was able to take action, or as the participant put it: “It made me notice all the times I didn’t notice.” (J)

4.4.5 General perceptions

Overall, participant 3 appeared to experience some highly beneficial effects as a result of his mindfulness practice which seemed to derive from a subtle yet profound shift in the way he was relating to the world. He noted that his “capacity to appreciate joy and beauty (had) increased (which had) made the world more interesting and (had given him) a more generous disposition.” (J) He observed an enhanced capacity to work with difficult inter-personal interactions, noting that: “A mindful approach ... allowed me to see that the (solution to a difficult inter-personal experience) was possible all the time and that sharing the problem was an act of connecting and that this was the resolution.” (P3:J) He also commented on an increased ability to disengage from work which was allowing him to enjoy his life more, stating that: “It’s not just about work...hardship and struggle but there are actually things that provide me with great joy...I feel happier because I feel as though my life is valuable over and beyond my work...perhaps more than I thought previously. I have been able to remember even when under stress that there is good in the world.” (J) He was careful not to overstate this assertion, commenting that: “It’s not like I’ve seen the light...but mindfulness has reminded me...that my life has value.” (I)

4.4.6 Barriers

Participant 3 experienced a number of barriers to mindfulness practice. Initially, he experienced lethargy during practice at the end of a long day at school which affected the quality of his practice. He was able to rectify this barrier through a simple adjustment to his posture. He also found some mindfulness practices more beneficial than others, commenting in relation to the loving-kindness practice: “I found it very hard to be mindful about it. I really found it difficult to get out of problem solving mode.” (I) However, a more serious barrier was his “self-inflicted” yet never-ending to-do list: “The barriers to this practice are largely about the

capacity for work to absorb all my time and this is the major reason for my practising mindfulness. Overcoming the barriers assist in overcoming the barriers.” (J) Ultimately, the pressures and distractions that this participant faced at the workplace made practising mindfulness at work largely impractical, leading him to find other ways of integrating mindfulness into his daily life. Interestingly, this participant expressed a concern that, although there may be “value in making an alternate time to practise, (the possibility that he) may not be able to...sustain it and...the subsequent feeling of failure may prove counter-(productive).” (J) He also expressed some concern about the self-care content of the course: “I think ... teachers might feel perhaps as though they were doing a junket or doing self-care when their job was to look after students...so I think giving it a context of, ‘You’ll be more productive. You’ll be less stressed. You’ll have better relationships with young people and therefore you’ll achieve better outcomes for them by practising mindfulness’ is a useful way to introduce it.” (I)

Ultimately, however, participant 3 expressed optimism about a continued practice of mindfulness at the workplace: “It fits in very well with our philosophy of practice...we are all aware of our need for self-care and I believe that there will be energy, certainly there is from me...to continue doing it in one way or another. ...With a bit of luck I’ll be more disciplined and do some more of it.” (I)

4.5 PARTICIPANT 4

Participant 4 was a 35 year old male teacher with two years of teaching experience. This participant was not a QCT registered teacher, coming instead from a background in music. Prior to the intervention, he had minimal experience with mindfulness, having completed a few guided sessions using an online mindfulness application with other staff members. He also stressed the fact that he had been exposed to various other reflective practices as part of his role at the flexi-school. He described the emotional demands of his job as variable from day to day with the potential to be quite demanding: “Some (days) might be really awesome and inspiring and full of laughter, and then... you might have days that are a lot more...emotionally intense in a negative way... there might be conflict between students, or students off-load stuff that’s going on for them, their own mental health, domestic violence, drugs...a mixed bag of things that might be affecting them and their families and their ability to...engage with school.” (I)

This participant attended 4 of the 6 intervention sessions, missing two sessions due to attending ante-natal classes with his partner. Throughout the intervention, this participant was working two part-time jobs in addition to his full-time work at the school, as well as going through a significant life transition as he prepared to be a new father. He estimated that he engaged in an average of 15 minutes per day practising informal mindfulness, such as walking – “walking to work, noticing each step, posture, breathing, ambient sounds, smells” (J) – as well as mindful eating and inter-personal practices, although these practices were generally restricted to weekdays. His formal mindfulness practice was very limited, although he was attending antenatal classes during the intervention period which included some breath awareness exercises. As a musician, he also found the mindfulness of sounds practice particularly resonated with him: “(It) was useful to have another way of drawing attention to what’s going on through sound because my brain wants to do that anyway.” (I) He estimated that he engaged in short formal mindfulness practices approximately half a dozen times each week for a few minutes at a time (I).

4.5.1 Stress

Participant 4’s baseline stress level (14) was at the upper level of the normal stress range. Although his DASS severity rating remained within the normal range from pre- to post-intervention, his questionnaire responses (Table 4.13) revealed a noticeable reduction in stress levels from T₁ (14) to T₂ (4).

Table 4.11 *Participant 4 pre- and post-intervention questionnaire results*

	Sessions attended (Total /6)	DASS (Stress)		MBI (Emotional Exhaustion)		ERQ (Positive Emotion Regulation - Reappraisal)		ERQ (Negative Emotion Regulation - Suppression)		FFMQ (Mindfulness)	
		T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂	T ₁	T ₂
Participant 4	4	14	4	11	11	6	6.2	2	1.5	154	162

This shift in stress levels was also identified by the participant in his interview responses. He identified that he had developed a greater awareness of physical tension which had assisted him to take action before his stress levels became too elevated. “The biggest thing for me has been...the recognition of those physical signs of when something’s getting to me and to (know) I can choose to change how this is making my body feel...because you can have a bunch of rowdy teenagers putting lots of demands on you...and you naturally just absorb that, so that’s probably been

the biggest thing for me...that further recognition of the physical responses to stress.” (I)

4.5.2 Emotional exhaustion

Participant 4’s emotional exhaustion levels remained stable in the low range of experienced burnout (11) from pre- to post-intervention, although his own observations were that his mindfulness practice had helped to bring him back to “middle ground” more often (I). He also noted that he often felt re-energised after the intervention sessions – “kind of buzzing” (I) – which he managed to carry into the rest of his evening and served as a reminder to him of why the mindfulness practices were worthwhile. In fact, this participant commented that the timing of the intervention sessions worked well to rejuvenate him after a day of feeling “frazzled” (I), thus allowing him to find the energy to spend some time engaging in the planning and administrative aspects of his work. He also described the practices as “grounding...centering...even energising...and focus(ing).” (J) He stressed the importance of mindfulness for staff at the school to minimise the energy they absorbed due to the mix of mental health, drug abuse and family violence issues experienced by young people who access the school: “Reminding yourself of what you can do and what you can’t do is important...mindfulness practice helps you re-centre, you know all this stuff’s going on, this is my place in it and I’m now ready to go forth and do what I can.” (I)

4.5.3 Emotion regulation ability

In terms of emotion regulation ability, participant 4’s baseline reappraisal scores were well above average when compared with the mean overall score for men. His pre-intervention score (6) increased slightly at post-intervention (6.2). His baseline suppression score was well below average for men (2) and this score decreased post-intervention (1.5). The participant’s questionnaire scores both before and after the intervention indicate a highly-developed emotion regulation ability. When questioned about his emotional regulation ability, particularly in a professional context, he commented: “I think that was already there because...we have to be patient and understanding and non-judgmental otherwise you don’t really last long here...I don’t think I’ve struggled with that before.” (I)

4.5.4 Mindfulness

Finally, participant 4's baseline mindfulness score was already at a level which was approximately equivalent to a regular meditator (154) at T₁. This score increased to above average for a regular meditator (162) at T₂. His scores for the five facets of the overall mindfulness score are included in Table 4.12 (with below mean scores marked*). At T₁, participant 1 was above average for all facets other than acting with awareness when compared to the means for demographically-similar non-meditators. At T₂, his scores were equivalent to or above average for all facets when compared to the means for both demographically-similar non-meditators and regular meditators.

Table 4.12 *Participant 4 pre- and post-intervention FFMQ results, with normative data*

PARTICIPANT 4			Non-meditators	Regular meditators
	T1	T2		
Observing	35	35	27.04	31.96
Describing	31	34	30.01	31.84
Acting with awareness	26*	30	28.32	28.08
Non-judging on inner experience	35	37	29.13	32.44
Non-reactivity to inner experience	27	26	22.82	25.70

Note: Normative data adapted from *Construct Validity of the Five Facet Mindfulness Questionnaire in Meditating and Non-Meditating Samples*, by Baer, R. A. et al. Copyright 2008 by Sage Publications.

This participant commented upon his increased awareness of being mindful. In particular, he noticed an increased level of inter-personal mindfulness, both personally and professionally: “In a school context I’m really conscious of being attentive to a conversation that’s going on with the young people I’m working with. Sometimes when I’m at home I might be trying to do three things at once...and I realized that I was doing all three of those things kind of inefficiently. I’ve brought that into being more present...in home conversations.” (I) Given his limited time, he also stressed the importance of being able to bring mindfulness practices into everyday activities: “you know eating mindfully, really focusing on what I’m eating” (I). He also described his mindful ritual for walking home: “I now try to do this every afternoon and make sure I put my phone away. I used to often check emails, facebook or news while I walked home. I now put my phone away and focus on walking and what’s going on in my body as I walk. I also pay stronger attention to my surrounds, thinking about the sounds I can hear, the smells and all the while noticing my breathing and how it anchors my walking. Something pleasant has been that I have further appreciated the lovely light at this time of day as I walk home.” (J) He observed that: “because some of the seeds were already sown from other

mindfulness or meditative stuff that I'd done before, it's built on that...It's one of those things you need to be reminded of continuously.” (I)

4.5.5 General perceptions

Having experienced beneficial outcomes from the intervention, this participant was highly supportive of incorporating mindfulness into the alternative school system as a form of professional development: “I think in our context some degree of mindfulness practice...is probably essential otherwise you're risking burnout. I mean some people are more equipped just by nature...to manage (stress) but I think mindfulness practice should be built in to how we run our sites.” (I)

4.5.6 Barriers

Despite his support for mindfulness, this participant found very little time to engage in formal mindfulness practice. Due to his various commitments, he found it very difficult to make time to practise formal mindfulness. This was partly a by-product of the somewhat chaotic and unpredictable nature of the role of teacher in an alternative school: “Because there's a semi-youth worker element to all of our roles, you have limited time to do everything. You might go in one day and have all these plans of what you're going to do in the afternoon and then you might be there helping refer a young person to youth services to look at emergency housing or other stuff that just comes up in day to day life shenanigans.” (I) This barrier to practice was also exacerbated by the fact that he was going through the major life transition of becoming a father, although he did acknowledge that “it's possibly the most useful time to do (mindfulness)” (I). He also predicted that his commitments would probably become even more time intensive with the arrival of his baby, and suggested creative means of incorporating mindfulness into his new baby-oriented routine. For this participant, his mindfulness practice centred around daily activities and it was important to him that he was able to engage in at least some informal mindfulness practices in this way. Having the option of informal mindfulness practices relieved some of the pressure of having to find time to do something extra, such as formal meditation, in his life: “The take-away is (that) you can bring (mindfulness) into everything you're doing rather than just hav(ing) to create this extra mindful session that (you) do each day. I can actually bring that into other daily practices.” (I)

Participant 4 also raised the notion that mindfulness practice is a habit which needs to be cultivated consistently: “I fear that sometimes things can slip over time. That’s why I think it’s good having reminders built into your routines or refreshers of different types of mindfulness.” (I)

Each of the participants’ stories, as related in this chapter, reveals their own unique experience of mindfulness. In addition, a number of themes emerged from a collective analysis of the data. Based on these themes, the following chapter provides a thematic discussion of the participants’ collective experience of the mindfulness-based intervention.

Chapter 5: Discussion

Chapter 5 contains a full discussion, interpretation and evaluation of the results with reference to the literature. While the structure of Chapter 4 was organised according to the study's specific research questions, the themes which emerged from the inductive process of analysis became the basis for the organisational structure of this chapter. These themes emerged as a result of analysis of both quantitative and qualitative data; thus, this structure was chosen to give a more authentic voice to the participants' recollections of their experiences emerging as a result of this study.

Section 5.1 revisits the theoretical framework of the study in order to provide a context for the various benefits reported by the participants subsequent to the mindfulness intervention. Section 5.2 discusses the physical, cognitive, social and emotional benefits subjectively experienced by the participants. This section encompasses a discussion of outcomes in relation to mindfulness, emotion regulation ability, emotional exhaustion and stress levels, thereby answering RQ1. Sections 5.3 and 5.4 respectively discuss the barriers and supports to practice as identified by the current participants, thereby answering RQ3. Sections 5.5 to 5.8 answer RQ2. Section 5.5 details implications arising from the unique experience of participants who did not complete the mindfulness intervention. Section 5.6 discusses findings in relation to participants' chosen modes of practising mindfulness. Section 5.7 discusses the participants' intentions for future mindfulness practice and section 5.8 considers the role of mindfulness in terms of educator professional development. Finally, section 5.9 details conclusions which can be drawn from the study, including a consideration of study limitations and recommendations.

Thus, this chapter addresses the original purpose of this study: to extend the research into the perceived impact of mindfulness as a strategy to manage teacher stress and to support the emotional work of teaching, particularly in the context of alternative schools. In addition, where relevant, a discussion of the underlying theoretical model is woven throughout the discussion of themes which have emerged from participant data. In this way, the discussion addresses the secondary purpose of this study, which is to explore the model of mindful emotion regulation as a

theoretical framework for the mindfulness-based intervention implemented as part of this study.

5.1 REVISITING THE THEORETICAL FRAMEWORK

The process model of emotion regulation (Gross, 1998b; Gross, 2015), introduced in Chapter 2 as part of the theoretical framework for this research, proposes a number of emotion regulation strategies that occur at different points along the cycle of emotion generation (see Figure 5.1). Research suggests that the earlier one is able to regulate emotion, the more positive benefits may ensue in terms of physiological, cognitive, social and emotional consequences (Tsouloupas et al., 2010). To date, attention has largely focused on cognitive change, or reappraisal, as an antecedent-focused emotion regulation strategy which is preferable to response-focused strategies, such as suppression. However, a recent adaptation of the process model of emotion regulation suggests that mindfulness may assist in activating emotion regulation at the earlier stage of attention deployment (Farb et al., 2013). Indeed, this model can be extended further to incorporate mindfulness at even the earliest stages of emotion regulation, situation selection and modification (see Figure 5.1). In so doing, it is proposed that the physical, cognitive, social and emotional benefits of mindful emotion regulation may be even greater than the benefits derived from subsequent strategies, such as reappraisal or suppression. Interestingly, participants in this study reported beneficial outcomes related to each of these aspects of experience – physical, cognitive, social and emotional (although it should be emphasised that these outcomes were based on subjective ratings of these aspects of experience). The theory of mindful emotion regulation, thus, appears to be a useful model to explain the beneficial outcomes seemingly experienced by the current sample of educators as a result of the mindfulness intervention. These outcomes are explored in turn in the following sections and form the basis for the organisational structure of the discussion which follows.

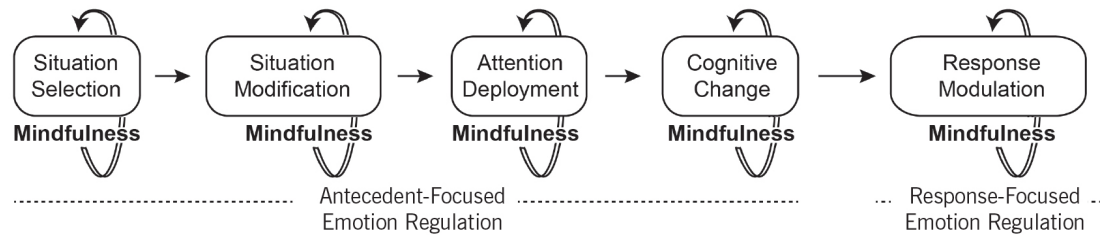


Figure 5.1 A process model account of mindful emotion regulation. Adapted from *Mindfulness Interventions and Emotion Regulation*, by Farb et al., 2013. Copyright 2013 by J. J. Gross.

5.2 BENEFITS FROM PRACTISING MINDFULNESS

5.2.1 Physical outcomes

The physical outcomes of the mindfulness intervention, as subjectively reported by the participants, appeared to be two-fold; the participants reflected on (1) immediate physical benefits and (2) an increased sense of body awareness which impacted on their capacity to proactively relieve stress. This is also apparent in a number of key item responses from the FFMQ. Three of the participants registered improvements on FFMQ items specifically related to body awareness, such as “When I’m walking, I deliberately notice the sensations of my body moving.” or “When I take a shower or bath, I stay alert to the sensations of water on my body.” The immediate benefits registered by participants included feeling more energetic (P2:J) and “alive” (P3:J), “a sense of lightness” (P1:J) and rejuvenation at the end of the day (P4:I). These immediate effects were experienced as beneficial *per se*, with a number of the participants recommending mindfulness training as an effective strategy for teacher “self-care” (P3:I). A particularly powerful example of mindfulness as “self-care” can be found in participant 2’s “belief in (mindfulness) as a healing process” (P2:J); this was expressed in response to her experience of improved recovery from an illness during the course of the mindfulness intervention. The notion of mindfulness as self-care has been described as critical to explaining the beneficial impact of mindfulness in a recent examination of teacher-based interventions (Skinner & Beers, 2016).

However, in addition to these immediate benefits, participants also reported that the heightened sense of body awareness cultivated through mindfulness practice – also known as *interoception* – led to an increased ability to relax and let go of tension. Indeed, the immediate benefits discussed in the previous paragraph may have stemmed, at least in part, from an increase in participant interoception.

Participants 2 and 4 identified that this heightened awareness of body tension and subsequent ability to release physical tension also resulted in an improved ability to relieve stress before it had the opportunity to become more deeply entrenched and problematic. Thus, heightened interoception may have enabled these participants to proactively relieve stress at an earlier point in the emotion regulation cycle than may previously have been possible.

These participants' comments lend support to repeated suggestions in the literature that, not only is interoception a key outcome of mindfulness practice, it is also one of the central mechanisms underpinning the operation of mindfulness, as discussed in section 2.4.6 (Brown et al., 2007; Holzel et al., 2011). The findings in this study reflect similar findings in previous studies (e.g. Schussler et al., 2016) where participants also commented on a heightened awareness of their physical responses to stress. At one level, increases in interoception, seemingly cultivated through mindfulness practice, appear to lend clarity to a primary appraisal of stressful stimuli (Greeson, 2009). As discussed in Chapter 2, the model of mindful emotion regulation pin-points early *identification* as critical to effective emotion regulation. Earlier identification is enabled through heightened interoception which increases access to momentary changes in body sensation. These changes provide clues as to physical manifestations of stress which are yet to reach cognitive awareness, thus allowing the proactive activation of adaptive emotion regulation strategies (Farb et al., 2013, p. 553). Findings of heightened body awareness also seem to suggest that participants are engaging in a process of reflexivity which is characteristic of reappraisal as an antecedent-focused emotion regulation strategy (Gross & John, 2003; Sharp & Jennings, 2016). Support for this suggestion is also found in a recent study which concluded that heightened interoceptive awareness was correlated with more effective emotion regulation (Fustos et al., 2013).

The experiences of the current participants, as discussed in this section, indicate that heightened interoceptive awareness, cultivated through mindfulness practice, enhances emotion regulation ability. Thus, the beneficial outcomes reported by this study's participants appear to be partially explained by the theoretical model which posits a connection between mindfulness and improved emotion regulation ability, at least at the level of interoception.

5.2.2 Cognitive outcomes

A number of participants also reported cognitive benefits related to the mindfulness intervention. Participant 4, for example, commented on the rejuvenating mental effect of the afternoon mindfulness sessions which re-energised him to continue to work at the end of a long day with students (P4:I). Similarly, participant 2 commented that she felt more focused and proactive at work (P2:J). The comments of participant 3 were particularly compelling. He noted the “clear, calming effect” of his mindfulness practice, commenting that his mind “stilled” and that he was more able to focus after practice which resulted in “improved quality of thought” (P3:J). He implied that this improved quality of thought had resulted in enhanced productivity, commenting that his mindfulness practice had improved “the quality of (his) work, if not the quantity” (P3:I). This is an important finding which could be critical to motivating educators and other busy professionals who feel that they do not have the time to take on additional commitments, such as mindfulness training. The implication that mindfulness training could actually reduce the time required to produce quality work suggests that it is a potentially wise investment of time. These results are supported by previous studies into teacher-based mindfulness interventions which have reported specific outcomes such as greater focus and working memory capacity (Bernay, 2014; Roeser et al., 2013). Previous research has found improvements in cognitive outcomes to be the result of effective emotion regulation strategies (Tsouloupas et al., 2010). However, while the current findings of beneficial cognitive outcomes are promising, a direct relationship between mindfulness, emotion regulation and cognitive benefits cannot be established from the data available. Until a fully integrated theoretical model emerges, supported by empirical evidence, the relationship between the various outcomes of mindfulness and the mechanisms underpinning mindfulness will remain unclear. The relationship between the cognitive and emotional benefits seemingly stemming from mindfulness practice is an appropriate avenue for possible future research.

5.2.3 Social and emotional outcomes

Social and emotional outcomes constituted the majority of benefits reported by participants. These outcomes have been combined in response to the definition of emotions adopted in section 1.3.1. This definition emphasises the importance of the social context of teaching in relation to the emotional experiences of alternative

school teachers (Corcoran & Tormey, 2012; Fried et al., 2015). Under this general theme, participants reported general improvements in stress levels, ability to cope, and an enhanced sense of connection, which included but was not limited to interpersonal connections.

Reduced stress and improved coping mechanisms

Section 5.2.1 (above) makes reference to the physical components of stress subjectively experienced by the participants. However, the participants' descriptions of their stress reactions also included reference to their ability to cope with the emotional experiences of stress. Thus, an additional discussion of stress is included here, amongst the social and emotional outcomes of the mindfulness intervention.

All of the participants noted that their ability to cope with stressful emotional situations seemed to improve over the course of the intervention. This is supported by overall results from the DASS questionnaire which revealed a definite trend toward reduced stress levels post-intervention (see Table 4.1 and Figure 4.1).

As discussed in section 5.2.1, two of the participants drew a connection between heightened body awareness and stress reduction. Not all participants made the connection between interoception and stress reduction, but they did make other connections with stress. Participant 3, for example, noted that, although stress did not disappear from his life, his ability to “shed stress” increased and he experienced a lower baseline of stress overall (P3:I); this subjective experience is supported in his questionnaire results. Similarly, participants 1 and 2 commented on their ability to cope more effectively despite their experience of external stressors remaining stable or even increasing over time. Other participants described an awareness of “dissipation of stress” (P2:I), a sense of calm and relaxation (P1/P2:J), “being on an even keel” (P1:I), finding the “middle ground” (P4:I) or being more steady emotionally (P1:I). Participants also noted an increased ability to “leave it behind” (P3:I). This ability to “leave it behind” suggests an increased ability to regulate attention by diminishing ruminative tendencies. Overall, the participants described a sense that life had become less chaotic and more peaceful.

The results from the interview data find support in the questionnaire data which revealed a distinct decrease in both stress (Table 4.1) and emotional exhaustion, which can occur as the result of protracted occupational stress (Table 4.1). These

results are revealing in relation to the findings of previous studies, some of which have shown mixed results on measures of stress and burnout (e.g. Frank et al., 2015; Harris et al., 2015; Jennings et al., 2011; Jennings et al., 2013; Poulin, 2009). Overall, however, the current findings are supported by existing research which reveals improvements in well-being, coping, stress and burnout as reported in previous studies (e.g. Beshai et al., 2016; Flook et al., 2013; Gold et al., 2010; Lomas et al., 2017; Poulin, 2009; Soloway, 2011).

Connection

The theme of connection emerged strongly as a result of inductive thematic coding of the data. Connection with self, connection with others and connection with life in general were all subsumed under this more general theme of connection. The notion of connection implies some form of relationship, either with oneself, others or the wider universe, and thus, necessarily incorporates a social or emotional component. These sub-themes are therefore discussed under the general banner of social and emotional outcomes.

Connection with self

Participants noted a greater sense of connection with themselves. This was evident as both body awareness (discussed above in section 5.2.1) and a more general sense of open awareness. Participants described this open awareness as a form of meta- or “double awareness” (P1:I), that is, an ability to notice what they were noticing. Participant 1 described this as “floating above” (P1:I) situations, which enabled a slight detachment or separation from being in the moment. For participant 1, this enabled a sense of appreciation for those moments which were pleasant, as well as an ability to detach from moments which were inherently unpleasant. Participant 3 described this meta-awareness as “noticing all the times (he) didn’t notice” (P3:I), thus encapsulating the paradox that, each time a moment of *mindlessness* is noticed, one is practising *mindfulness*.

These comments appear to be evidence of the participants experiencing a sense of detachment or “de-centering” of experience in relation to the self, which was discussed in section 2.4.6 as one of key components of mindfulness (Holzel et al., 2011; Fresco et al., 2007). Perhaps counter-intuitively, this “de-centering” of experience in relation to the self may be related to heightened self-awareness or the ability to observe oneself from another perspective. The experience of detachment

has been posited to lead to a reduction of self-referential processing which decreases the significance of stimuli to oneself and increases one's self-awareness and one's ability to self-regulate in adaptive ways (Holzel et al., 2011). As such, the experiences of “detachment” (P1:I) described by the participants may have formed a pathway between mindfulness and the participants' improved ability to cope with stressful experiences, discussed earlier.

General self-awareness seemed also to relate to a number of insights or realisations noted by participants. A number of the participants commented upon moments of insight brought about by becoming aware of their own habits of mind. This awareness was most likely brought about through an increased ability to regulate or focus their attention on the contents of their thoughts through mindfulness practice (Holzel et al., 2011). In particular, a number of the participants had insights into patterns of resistance to mindfulness practice (discussed in more detail in section 5.3.2 below), while participant 1 commented particularly on the “mind-shifts” (P1:I) which she had experienced as a result of the intervention. Previous research has also reported participants describing shifts in perspective as a result of mindfulness training (e.g. Schussler et al., 2016; Shapiro et al., 2006). The notion of “mind-shifts” may be underpinned by an enhanced capacity to engage in cognitive reappraisal (Holzel et al., 2011). The use of this language – “mind-shift” – implies a shifting of awareness which is possible within a single moment in time. This appears to be a similar process to cognitive reappraisal, an adaptive form of emotion regulation, lending further weight to the theoretical framework of mindful emotion regulation.

Connection with the world

The increased sense of connection to self - experienced by the participants variously as body awareness, meta-awareness and insight - also resulted in a greater sense of connection with others and the external world in general. Likewise, participants raised the idea that mindfulness practice seemed to enhance their experience of joy and happiness in life; participant 3 commented that he was finding little aspects of life “more interesting” (P3:J) and finding “greater value” (P3:I) in his own life, while participant 1 noted that it was even pleasurable attending the mindfulness intervention sessions (P1:I). These comments add to the research which indicates that one of the pathways through which teachers experience beneficial outcomes from mindfulness practice is through an expansion of their emotional

repertoire to include greater emphasis on positive emotional experiences (Roeser, 2016; Skinner & Beers, 2016).

Inter-personal connections

In terms of connections with others, all participants had some experience of the positive impact of mindfulness on inter-personal communication. Participants commented on becoming more open and accepting, or noticing a more generous disposition in themselves (P3:J). Some participants commented specifically on the differences they had experienced in emotional interactions with others; participant 1, for example, noted that she was taking things less personally and was more able to activate a sense of compassion for others while in the midst of a difficult communication (P1:I). An increased sense of compassion has also been reported by research participants in other studies (e.g. Frank et al., 2015; Schussler et al., 2016). The causal significance of compassion to the outcomes of mindfulness practice is not entirely clear but it appears to be a related mechanism which contributes to the beneficial outcomes of mindfulness interventions (Holzel et al., 2011).

Participants also commented on a sense of “space” or “separation” or an “ability to disengage” (P3:I) from difficult emotional experiences with others, again, raising the notion of detachment (Holzel et al., 2011; Fresco et al., 2007) cultivated by mindfulness. Participant 3 noted that mindfulness seemed to allow him to momentarily “remove the story” from a difficult interpersonal experience in order to re-centre himself and return to the situation from a more objective perspective (P3:I). Others noticed that they had become “less reactive” (P2:J) and more able to “let well alone” (P2:J). Participants appeared to be describing a decreased sense of emotional reactivity which is a theme which recurs throughout the research (e.g. Bernay, 2014; Schussler et al., 2016). This interpretation of the participants’ qualitative data is also apparent in a number of key item responses from the FFMQ. A number of participants registered improvements on FFMQ items specifically related to non-reactivity to inner experience, such as: “When I have distressing thoughts and images, I am just able to notice them without reacting”.

Participant comments also suggest that they were engaging in a process of cognitive reappraisal as an active coping mechanism (Chang, 2013; Gross, 2015; Lazarus & Folkman, 1984). This appears to be in keeping with both the theoretical framework for this study and research which suggests that novice meditators

experience improvements in emotion regulation ability by engaging in active cognitive regulation of emotional reactions through processes such as cognitive reappraisal (Holzel et al., 2011). The process of cognitive reappraisal is particularly reflected in participant 1's comment that: "I was more of a black and white thinker before (the mindfulness training)...but now I think I'm more able to say, 'Well, this is a bad moment in our relationship - it's not the whole relationship'" (P1:I).

Not only did participants register benefits in relation to decreased emotional reactivity to stressful interactions with others, they also noted beneficial outcomes in positive interactions. Participant 4, for example, commented that mindfulness was enabling him to be more present in inter-personal communications. The comments from participants in relation to improved inter-personal communications are supported by research which concludes that mindfulness is associated with an increased ability to maintain healthy relationships (Bernay, 2014; Meikeljohn et al., 2010; Singh et al., 2013).

Personal and professional benefits

Interestingly, although the intervention was structured specifically for teachers and focused on the use of mindfulness within the context of the school, participants seemed to register greater social and emotional benefits in their personal lives than in their professional roles. Similar results have been found in previous research (e.g. Roeser et al., 2013). This is also consistent with a number of previous studies in which participants observed that a general improvement in their perceived quality of life had a spill-over effect from work to home (Crain, Schonert-Reichl & Roeser, 2016; Singh et al., 2013; Soloway, 2011).

This is not to suggest that participants did not register any benefits in relation to their professional roles. Participants did report a reduced experience of stress in relation to their professional roles; for example, participant 2 commented that she was better able to manage the daily "wear and tear" of work as a result of mindfulness training (P2:I). Moreover, there were some positive observations around professional inter-personal connections. Participant 1 commented that she had been using mindfulness to help cope with stressful interactions with the young people at work both "in the very moment and, at other times, a short while after to help (her) think about it in a more relaxed way" (P1:J). This comment is consistent with previous research in which teacher participants have observed more positive

interactions with students as a result of mindfulness training (Schussler et al., 2016), as well as improved capacity to manage student behaviour (Jennings et al., 2013; Singh et al., 2013). Unfortunately, however, the qualitative data from the current study reveals little more in relation to the nature of teacher-student interactions, despite the fact that participants were provided with opportunities to elaborate on this aspect of their work both in their journal reflections and during interviews. Previous studies have commented on the need to conduct further research into the impact of mindfulness on teacher-student interactions (e.g. Schussler et al., 2016). It is suggested, here, that this is particularly needed in the case of alternative schools.

Overall, then, participants appeared to garner greater benefits in their personal lives than their professional lives. Indeed, participants 2 and 4 commented that they had not noticed a great deal of difference in the emotional interactions experienced in their professional life.

Perhaps the experience of the educators in this study is due, in part, to the differences in expectation that alternative school educators may have in relation to their professional roles when compared to their personal lives. During their post-training interviews, each of the participants commented that their professional role at the flexi-school was inherently emotionally demanding. Moreover, participants 1, 2 and 4 commented that they already practised the mindful principles of non-judging, compassion and acceptance in their professional roles. They also suggested that those qualities were essential for them to function effectively in the context of the flexi-school. As the research into alternative schools indicates (Morgan, 2013; McGregor & Mills, 2012; te Riele, 2012), the relational component of these schools is perhaps their most critical function. There is an expectation amongst flexi-school educators that their role is to provide emotional support and to model appropriate social behaviour to the young people at the school. The school's philosophy of reflective practice indicates an openness to and a heightened awareness of the need for strategies, such as mindfulness, which may cultivate an emotionally supportive environment for young people and staff alike. Perhaps the importance of creating an emotionally supportive environment is so high up in the consciousness of the flexi-school educators that they are already meeting the needs of students in this way. In contrast, perhaps the need to create an emotionally supportive environment is not as critical within the personal lives of these educators. Certainly, the dynamics of a

personal relationship means the teachers are not in the role of being professionally responsible in that context. Perhaps mindfulness practice raised an awareness of emotional reactivity in the participants' personal lives resulting in a greater subjective experience of change in the participants' personal lives as compared to their professional lives. It is possible, then, that differences in both emotional expectations and emotional responses generally operate in these two contexts.

Given the emotional work that teachers at alternative schools perform in providing support to students who often come from traumatised backgrounds, a well-developed ability to effectively regulate emotions would appear to be beneficial, if not essential. This raises the significance of the questionnaire data which revealed that all participants in this study had very high emotion regulation abilities even prior to mindfulness training. The following paragraphs discuss the relevance of these questionnaire scores to the professional context of working in an alternative school.

The fact that all participants had high emotion regulation ability scores prior to the mindfulness intervention appears to be related to the context of the current research. As previously discussed, the provision of an emotionally supportive environment is prioritised in the flexi-school context and, thus, staff need to be equipped to create this environment (Morgan, 2013; McGregor & Mills, 2012; te Riele, 2012). Prior to the intervention, all four participants demonstrated above average use of cognitive reappraisal as a positive emotion regulation strategy. The participants' use of suppression, which is generally considered a maladaptive emotion regulation strategy, was less clear-cut. Two of the four participants exhibited below average use of suppression as an emotion regulation strategy, while the other two participants demonstrated above average levels of suppression. These results raise questions as to whether suppression could potentially be used as an adaptive coping strategy in emotionally stressful environments, such as this flexi-school; perhaps it is adaptive to suppress one's anger in the sometimes volatile context of a flexi-school where the alternative could be a potentially dangerous situation. This is a question which could be addressed in future research.

In addition to their emotion regulation scores, all but one of the four participants demonstrated high pre-intervention mindfulness levels equivalent to regular meditators. The fourth participant demonstrated mindfulness levels almost equivalent to a demographically-similar non-meditator. In summary, overall pre-

intervention questionnaire results for these four participants revealed a group of individuals with high levels of mindfulness, who generally used healthy emotion regulation strategies. These results suggest that educators who have chosen to work within the alternative education sector, or at least effective and resilient educators in this context, either require or develop these attributes due to the emotional content of the work that they are required to perform on a daily basis.

There is a relative paucity of research in relation to the qualities of effective alternative school educators (Coulter, 2010). However, the limited research that does exist indicates that alternative school educators have high levels of self-awareness, and tend to be guided by principles of communication, collaboration and cooperation (Dyson & Plunkett, 2012; EREA, n.d.-b). Moreover, these educators tend to recognise the importance of actively listening to students, and are skilled at interpreting non-verbal student cues and redirecting negative behaviours before they escalate (Coulter, 2010). Interestingly, research into the qualities of alternative school teachers also indicates that these teachers know how to be “in the moment” (Coulter, 2010, p. 93); that is, the research indicates that alternative school teachers demonstrate mindful qualities. Moreover, the research shows that alternative school teachers have a mindset that helps them to see “obstacles as opportunities” and “challenges as chances to create change” (Coulter, 2010, p. 87). The very wording of these descriptors appears to indicate that reappraisal is a fundamental part of the job of alternative school educators. Given the qualities of alternative school educators, then, it is hardly surprising that the participants in this study demonstrated high scores on both emotion regulation ability and mindfulness, even prior to the mindfulness intervention. The comments of the participants in this study and their high questionnaire scores reflect the notion that high levels of both mindfulness and emotion regulation ability are necessary to function in their professional roles.

These qualities also reflect the priorities and philosophy of the flexi-school culture as one that supports the well-being of its staff. The school’s priorities are embodied in the school’s five principles: rights, respect, relationships, responsibility, and safe and legal (EREA, n.d.-a). Moreover, these priorities and principles appear to be part of the daily operation of the school, with a number of the participants’ interview responses commenting upon the school’s commitment to the use of

reflective practices which support the staff in their development of a compassionate professional mode of being.

This combination of the personal predisposition of school staff to high levels of emotion regulation ability, together with the commitment of the school to reflective practices, may explain both the initial profile of the participants who completed the intervention as well as the overall level of school support for mindfulness in general. It may also help to explain the finding that participants experienced less beneficial impact on professional social and emotional outcomes than on personal outcomes.

Overall, these findings suggest that there is a complex range of factors, including individual predispositions to emotion regulation and mindfulness and school context, which come into play in determining the beneficial outcomes of mindfulness practice.

The effect of mindfulness practice on emotion regulation ability

It could be argued that the high range within which the educators in the current study scored on emotion regulation ability and mindfulness prior to the mindfulness intervention should have resulted in little or no discernible improvement in scores following the intervention. However, all of the participants did register an increase on their overall mindfulness score post-intervention and most of the participants registered an increase on their emotion regulation reappraisal score post-intervention (with one participant remaining stable on this score). In terms of the emotion regulation suppression scores, most participants registered a decreased score, also indicating improved emotion regulation ability. Participant 1, however, did register an unexpected increase in suppression post-intervention. A possible explanation for this slight anomaly is addressed below.

The individual questionnaire responses for participant 1 revealed an increase in the use of suppression as an emotion regulation strategy. However, this increase seemed to be limited to the suppression of negative emotions and was not evident in relation to positive emotions. This could be explained by reference to the emotional reactivity sub-scale measured by the Five Facet Mindfulness Questionnaire (FFMQ); for example, participant 1 scored highly on a number of the ERQ suppression sub-scale items, such as: “When I am feeling negative emotions, I make sure not to express them.” However, she also scored highly on a number of FFMQ items related to non-reactivity, which is considered to be a positive quality, such as: “When I have

distressing thoughts or images, I just notice them and let them go.” Although these items are measuring different constructs, there is a certain alignment between the concepts of suppression (considered to be a maladaptive strategy) and non-reactivity to inner experience (considered to be an adaptive strategy). The wording of these items may be too ambiguous to accurately reflect the distinction between these concepts. This raises questions as to the level of detachment or non-reactivity which could be considered either positive or negative. Perhaps there is a fine line between noticing emotions without reactivity and noticing accompanied by suppression of emotion; perhaps the distinction is context dependent. The distinction between non-reactivity and suppression, particularly as it relates to the wording of relevant items of the FFMQ and the ERQ, could be a potential area for future research.

Despite this discrepancy, the overall results of this study indicate that there may be a connection between mindfulness and emotion regulation ability, which is consistent with findings of previous studies (Frank et al., 2015; Jennings et al., 2013; Lomas et al., 2017; Schussler et al., 2015). Notably, across the participants from the current study, not only were there high initial emotion regulation ability scores but also high initial mindfulness scores. These results alone indicate that there may be a link between mindfulness and emotion regulation ability, although these results are unrelated to the mindfulness intervention. This connection is, however, also evident in the overall increases in both mindfulness and emotion regulation ability observed post-intervention, particularly as these increases were registered despite the very high initial scores of the sample overall. These results are supported by the theoretical model underpinning this research which suggests that increased mindfulness leads to increased emotion regulation ability (Farb et al., 2013). These results also suggest that the mindfulness intervention may have resulted in increased mindfulness levels for all participants. However, given the small sample size, lack of control group and the high initial scores on these measures for all participants, this evidence is not conclusive. The data does, however, reveal that participants experienced increased levels of both mindfulness and emotion regulation ability, in conjunction with decreased stress and emotional exhaustion levels. While it is not possible to draw any causal conclusions from these results, the mindfulness intervention implemented within the specific context of this metropolitan Queensland flexi-school appears to

have led to beneficial outcomes in relation to levels of educator stress, emotional exhaustion, emotion regulation ability and mindfulness.

5.3 BARRIERS TO PRACTISING MINDFULNESS

Previous research has paid little attention to the barriers to sustaining a mindfulness practice despite the evidence that educator-participants from prior studies have struggled with establishing and maintaining independent mindfulness practice (Poulin, 2009). Prior studies have emphasised the need for inquiry into the means of supporting on-going practice (Poulin, 2009; Singh et al., 2013). In response to this need, the current research specifically explored the barriers to practice which emerged for participants. Thematic analysis of participant data uncovered a number of barriers which appeared to fall under the banner of two general themes: barriers which are *internal* to practice and those which are *external* to practice.

Barriers which are *internal* to practice are defined as those barriers which arise for practitioners while engaged in, or attempting to engage in practice. Barriers which are *external* to practice are defined as those which delay or prevent practitioners from even attempting to engage in practice. These themes are explored in the following sections.

5.3.1 Barriers internal to practice

The 'five hindrances'

Barriers internal to practice were defined as factors which arose for participants while engaging in either formal or informal mindfulness practices. The primary internal barrier raised by participants was frustration at lack of mastery over the practices. This lack of mastery manifested in a number of ways, for example, through lethargy which resulted either in a lack of focus or in participants succumbing to sleep. Participants also found environmental distractions to be a barrier to practice, for example, participant 3 noticed a constant barrage of workplace distractions when he attempted to engage in formal mindfulness practice at work. The participants also found independent mindfulness practice (outside of the intervention sessions) challenging, noting that the guided practice made it easier to remain focused. Similar barriers were found in other studies (Jennings et al., 2011; Poulin, 2009) in which many participants struggled to undertake independent practice.

Interestingly, these internal barriers correspond to the major forces which hinder one's ability to meditate, as recognised in Buddhist meditation practice. In meditation, these so-called "hindrances" are considered to be universal, in that we all experience them. The "five hindrances" in meditation are: 1) desire, 2) aversion, 3) lethargy, 4) restlessness and anxiety, and 5) doubt. They are called "hindrances" because they obstruct development of the mind which is a primary goal of meditation (Thera, N., 1994). The barriers were addressed in the mindfulness intervention implemented as part of this study; however, the fact that these internal barriers were addressed and are recognised hindrances does not, of course, eradicate the challenge in working with them, particularly for novice meditators.

In the participants' comments, it is possible to see each of the five hindrances: *desire* (or a wish for their meditation practice to be a particular way), *aversion* (a wish for their meditation practice to be different to how it is), *lethargy* (sleepiness), *restlessness* (lack of focus during meditation) and *doubt* (a feeling of lack of mastery over the mindfulness practices) (e.g. P1:I/P3:J). In meditation, the primary instruction in working with the hindrances is to turn them into the object of one's meditation. The issue then becomes not whether a hindrance is present, but whether one is aware – or mindful - of its presence (Thera, N., 1994). Thus, the barriers which participants identified as internal to their practice of mindfulness, in fact, also provide a primary motivation for practice. According to Buddhist tradition, to be mindfully aware of one of the hindrances arising is an effective means of overcoming the hindrances (Thera, N. 1994). Participant 3 expressed his intuitive understanding of this principle through his comment: "Overcoming the barriers assists in overcoming the barriers." (P3:J) This insight is echoed in one of the principle Buddhist texts (Pali Canon, AN4:61), which states: "If a noble disciple has seen these five as defilements of the mind, he will give them up. And doing so, he is regarded as one of great wisdom, of abundant wisdom, clear-visioned, well endowed with wisdom. This is called 'endowment with wisdom'."

5.3.2 Barriers external to practice

Time

Not surprisingly, time was foremost amongst the barriers external to practice identified by participants. Time was a barrier for some participants in terms of missing intervention sessions and also in terms of engaging in independent

mindfulness practice beyond those sessions. Participants commented upon self-inflicted to-do lists, increasing work demands, and the challenge of juggling conflicting priorities. The general “pressures” (P3:I) of life were a factor for all participants. However, the pressures of life were an even more critical factor for a number of participants who were undergoing major life transitions, such as participant 4 becoming a first-time parent and participant 1 buying a new house. Interestingly, previous research has indicated that teacher-participants often tend to utilise mindfulness strategies when overwhelmed with stress (Bernay, 2014). This tendency was evident in the current study, but not exclusively, as participants also commented on using mindfulness as a way of stepping into a mode of appreciation; that is, participants found that a mindful approach to life not only resulted in an enhanced capacity to cope with negative emotional experiences, but also resulted in a greater awareness of positive emotional experiences, an outcome which is supported by recent research (Roeser, 2016; Skinner & Beers, 2016).

Related to the issue of being time-poor was the issue of disorganisation and lack of routine or habit raised by participant 2. Participant 3 noted, however, that: “It is really easy to say, ‘Look, I would be mindful but I’ve just got to sort this out’ or ‘I would stop now but I’ve got to get that done’. There’s a never-ending to-do list.” (P3:I) This recognition that the list of things to do is potentially endless is an insight cultivated through mindfulness practice. Insights such as this are arguably the first step towards taking action with the potential to lead to positive change in one’s life. Participant 3 noted an additional frustration in terms of setting a time to practise, in that if he was not able to stick to this time, “the subsequent feeling of failure may prove counter-(productive).” (P3:J) The conflicting aspects of the participants’ stories – with the desire to practise meeting obstacles - may represent a theme which resonates in the general experience of an evolving mindfulness practitioner.

Resistance

Another external barrier identified by participants was named as “a resistance to doing what is good for you” (P1:I). Participant 2 commented on a resistance stemming from self-judgment as “weak and vulnerable” (P2:J). Such beliefs highlight the dilemma of what may be an underlying human dialogue between various competing aspects of self which vie for expression in the journey towards integration of self (Anderson, 2005).

Interestingly, these comments, which seem to operate on a deep psychological level of resistance and self-worth, were made only by female participants. Given the limited sample of participants, this finding may not be significant. Indeed, the observation contrasts with a previous study which found that women were more likely than men to access complementary and alternative health practices, including meditation, at least in a population of cancer survivors (Fouladbakhsh & Stommel, 2010). Literature in relation to gender differences and resistance to meditation appears to be limited, and could be an area for future research.

Previous research has, however, observed the resistance of educators towards practising self-care (Schussler et al., 2016). This also aligns with research into the experience of many teachers who feel a tension between meeting the needs of their students and engaging in self-care as a restorative practice (MacDonald & Shirley, 2009; Skovholt & Trotter-Matthison, 2011). These findings suggest the importance of aligning the content of mindfulness interventions with core values held by teachers.

Lack of commitment

Implicit in a number of the participants' comments was a lack of strong resolve to personal mindfulness practice. It should be emphasised that participants volunteered to be part of the intervention without any coercion. However, it is possible that lack of commitment to personal practice could have stemmed from the fact that participants did not need to make any investment in the training, other than the time required to attend at least four sessions after school. Volunteer participants to the study, while interested in and open to the concept of mindfulness, had not sought out the intervention due to personal life circumstances. In addition, they had not made the financial investment which is generally incurred when registering for an MBSR course and which may result in greater commitment to mindfulness practice. This is an issue in teacher-based mindfulness research which generally recruits from a sample of volunteer educators resulting in a biased sample of participants (e.g. Flook et al., 2013; Jennings et al., 2013).

5.4 FACTORS WHICH WERE SUPPORTIVE OF PRACTICE

Previous research into school-based mindfulness programs (e.g. Jennings, 2011; Poulin, 2009) has found that teacher-participants often struggle with

independent mindfulness practice. This research has suggested the need for inquiry into the best means of supporting on-going mindfulness practice for teachers. The current study found that, while participants were reasonably consistent with informal mindfulness practices, they all struggled, to varying degrees, with establishing a regular formal mindfulness practice. This is consistent with the findings from previous studies (e.g. Poulin, 2009). However, a strength of the current research was its emphasis on searching the data for factors which could potentially operate to support ongoing mindfulness practice. The following section expands upon these factors.

5.4.1 Shared experience

A number of the participants in this study felt supported in their mindfulness practice as a result of sharing the experience of the intervention with their colleagues. One participant noted that, by sharing this experience with colleagues as a form of professional development, staff became more able to provide support to each other in the workplace during times of challenge (P2:I). This participant suggested that, due to a common understanding of the various tools and strategies outlined as part of the intervention, staff would be more likely to recall and access those tools and strategies with the support of, or at the prompting of their colleagues.

Moreover, this support seemed to move beyond the notion of a shared experience with peers into the physical environment of the school. The same participant noted that, because the guided mindfulness sessions had been held on the school grounds, mindfulness was “present in the workplace” (P2:I). This “presence” was encouraged, in part, through the placing of physical reminders to be mindful around the school grounds, such as the little blue stickers and reminder postcards which were provided as prompts for practice during the intervention sessions. However, the sense of “presence” seemed to go beyond these small physical reminders, to a sense that the space of the school was now imbued with mindfulness created as a result of the shared experience of mindfulness practice which had taken place on campus during the intervention. This notion of “presence” is particularly appropriate and meaningful given the emphasis in mindfulness practice on the notion of “presence” or “being in the present moment”.

Another participant noted that the shared experience of mindfulness led to a compounding of the positive benefits of practice. This participant’s partner (and

colleague) was also taking part in the intervention. The first participant noticed an increased sense of emotional stability in her partner and commented that this had resulted in a beneficial cross-over effect on her own emotional stability (P1:I). Interestingly, the comments relating to the supportive nature of the shared experience of mindfulness were made exclusively by female participants, raising the question as to whether females find greater support in shared social experiences than males do. Previous research has found differences in gender preference for social support, at least in clinical populations (Clarke, Booth, Velikova & Hewison, 2006), so this may be a potential area for future research.

The notion of community and shared experience appear to be key factors in promoting the well-being of educators. Social support has been suggested as a protective mechanism against burnout (Xanthopoulou, Bakker, Demerouti, et al., 2007). Research is beginning to recognise that coping is often a social process which derives from the social environment in which it occurs (Skinner & Beers, 2016; Tolan & Grant, 2009). Participants in a recent teacher study also raised the importance of social support in order to sustain a mindfulness practice (Schussler et al., 2016). This led the researchers in that study to speculate that mindfulness interventions may be most beneficial when incorporated at a whole school level to allow for the building of a shared language of mindfulness-based experiences. These findings also link to recent research which suggests that the need for relatedness and belonging (McIntyre, 2010) is critical to support teachers and may help to create resilience (Le Cornu, 2013). Not surprisingly, given these findings, previous research has indicated that the introduction of mindfulness training can have a positive impact on school culture overall (Metis Associates, 2011). These findings are important as successful models of change generally include strategies for incorporation of change into the organisational structure (Leiter & Maslach, 2014). These findings therefore have implications for the implementation of sustainable mindfulness interventions within educational contexts.

5.4.2 Prior exposure to mindfulness concepts

All of the participants had had some experience with meditation or mindfulness prior to participating in the intervention. This previous experience seemed to encourage them to be open to the practice. With the exception of participant 2, who had previously completed a full eight-week MBSR program, this prior experience

was quite limited. However, a number of the participants commented on the way in which the intervention built upon pre-existing knowledge relating either to mindfulness or to related concepts. Moreover, the flexi-school's philosophy of reflective practice, referred to in section 3.3, was supportive of the participants' practice of mindfulness. These factors point towards the importance of both context and timing in one's life in terms of readiness to adopt a mindfulness practice. As participant 2 noted: "It's a case of...the people who do it have to take it on...you know, it's not the kind of thing that you can make people do." (P2:I) In fact, the participants' experiences seem to indicate that each person's mindfulness journey is unique but needs to be built upon a readiness based upon exposure to ideas and teachings related to mindfulness. Benefits experienced from initial forays into mindfulness practices may, ultimately, lead to a deepening of mindfulness practice and deeper insights into the relevance of practice. Certainly, each person's changing life situation plays a role in if, how and when mindfulness is adopted as a personal journey and how far along this journey they are prepared to travel.

5.4.3 Course structure

The intervention structure was identified by all participants as being convenient for teachers. The intervention was deliberately designed to fit between peak preparation, assessment and reporting periods of a typical ten week Queensland school term. Participant 2 had previously completed the eight week MBSR program and noted that the six week adaptation was "certainly more doable than that" (P2:I). These comments indicate the importance of ensuring that the intervention created a balance between providing participants with comprehensive coverage of course materials and enough time to become immersed in the practice of mindfulness, without requiring an overwhelming commitment at a time when their professional commitments were at their peak.

The importance of intervention structure, including dose, was also raised in a recent study (Beshai et al., 2016) which ran an intervention with a similar structure to the current study and also found that customisation of mindfulness training may be both practical and beneficial for busy teacher populations. The same study found no significant differences between participants based on how many sessions they had attended. The decrease in stress and emotional exhaustion found in all current participants' questionnaire results, regardless of whether they had attended four, five

or six sessions, raises similar questions as to the dose and frequency of mindfulness practice required for beneficial outcomes and may be an appropriate subject for future research.

Course location and time

Other participants raised the fact that having on-site training immediately after the school day made the mindfulness intervention more accessible for teachers. Participant 4 commented that having the sessions after school “rejuvenated” him which created the energy he needed to conduct administrative or other tasks in preparation for the following day. Participant 1 also commented that having to go home and get changed before heading out again to get to a mindfulness session would be a “motivation killer” (P1:I). However, the course location seemed to be important for reasons other than pure convenience. As discussed above in section 5.4.1, the shared experience of mindfulness with colleagues on campus seemed to create a physical presence of mindfulness within the physical school context, which was, in itself, a motivation to practise mindfulness.

Flexibility

Although intervention sessions were only offered one afternoon per week for the duration of the course, participants raised the possibility of flexible time delivery as a means of supporting their mindfulness practice. This was in recognition of the fact that participants had commitments which sometimes conflicted with the mindfulness sessions. In order to cater for these conflicts, participants suggested running multiple sessions at different time slots, or filming sessions for later reference (e.g. P4:I) This raises interesting possibilities for mindfulness training for busy professionals, including professionals in remote locations who often do not have access to professional development opportunities. Recent research into online delivery of an ACT (Acceptance and Commitment Therapy) version of mindfulness training found that online delivery is potentially as effective as face-to-face delivery (Lappalainen et al., 2014). While online delivery may have advantages in terms of flexibility, particularly for certain populations, it would come at the expense of shared group experience. Further research would be necessary to determine the relative benefits of this mode of delivery.

Guided sessions

A number of the participants raised the significance of having guided sessions. This seemed to be, in part, because the participants were novice meditators and found the structure of a guided session useful while they were learning various techniques (e.g. P1:I). Similar results have been found in other studies (e.g. Poulin, 2009). This raises the importance of having an outside facilitator leading the sessions as a form of “enforced” mindfulness practice. Further support for this idea can be found in participant 3’s comment that having a scheduled time for practice one afternoon a week lent the practice a certain importance: “The fact that it was being led...gave it a significance and importance (and without that) maybe I would be inclined to let it drop it down the list...When someone else is there you’ve just got to do that.” (P3:I) These comments suggest that a commitment to another person, whether that is the researcher or mindfulness facilitator, may provide extra motivation and thereby make mindfulness practice a higher priority. Perhaps this is particularly the case for teachers who have chosen to work in what may typically be categorised as a ‘helping’ profession which may result in internal conflict between meeting student needs and engaging in self-care (MacDonald & Shirley, 2009; Skohvolt & Trotter-Matthison, 2011).

Reminders

Most of the participants commented on the usefulness of reminders to support their mindfulness practice. Participant 4 commented on the need for continuous reminders in order for a habit to be established. The possibilities of email reminders and follow-up or refresher sessions were raised by participants as potential avenues for supporting ongoing mindfulness practice. This is interesting given the definition of mindfulness referred to earlier by Bikkhu Bodhi, a Theravadin monk and scholar, who defined mindfulness as meaning “to remember to pay attention” (Wallace & Bodhi, 2006, p.12). These reminders, therefore, seemed to be central to remembering to practise, particularly for novice meditators. Built into the course content were a number of reminders: participants were encouraged to place little stickers (blue dots) on their electronic devices or in doorways as a reminder to be present; participants were also given visual postcards as reminders of various techniques covered during the course; participants were also given access to recorded guided meditations as a reminder of the meditation process. Again, as discussed in section 5.4.1, the school’s

physical context created a reminder to practise as reflected in participant 2's comment: "I don't have to see one of those little blue dots anymore...it's actually in the space at school now...it's here." (P2:I)

Course content

Participants appeared to enjoy the diversity of content covered throughout the weekly intervention sessions. A number of participants raised the fact that the different options provided within the intervention – such as walking meditation, breath awareness, mindfulness of sound and loving-kindness meditation - met the differing needs of individual participants. While not all practices resonated with all participants, each participant seemed to find at least one practice which worked for them.

Participants also appreciated the structure of the intervention which provided a different focus for each week, such as inter-personal mindfulness or working with resistance. Participants commented that these focuses provided a new way of thinking about mindfulness in the context of the school, as well as providing the basis for the 'mind-shifts' they were experiencing (P1:I). The use of a variety of materials, such as poetic devices combined with theoretical information and scientific background, also provided a range of contexts and rationales which encouraged participants to practise mindfulness.

Participants also stressed the importance of relating staff mindfulness to a flow-on effect for students in order to provide a "hook" for teachers. This concern, again, relates back to the internal tension experienced by many teachers around the notion of self-care (MacDonald & Shirley, 2009; Skohvolt & Trotter-Matthison, 2011).

5.5 THE UNIQUE CASE OF PARTICIPANTS WHO DID NOT COMPLETE COURSE REQUIREMENTS

Despite the relatively healthy pre-existing emotional profiles of the four participants, they still experienced beneficial outcomes from the mindfulness intervention. Extending the analysis beyond the outcomes for these four participants, to consider one of the initial registrants who did *not* complete the minimum intervention requirements, another interesting story emerges.

One of these participants scored within the level of extremely severe stress and the high range of emotional exhaustion prior to the mindfulness intervention. Interestingly, this participant demonstrated relatively healthy use of emotion regulation strategies, scoring just below average in terms of both cognitive reappraisal and suppression. This is interesting because effective emotion regulation is generally considered to play a protective role against the incidence of emotional exhaustion (Tsouloupas et al., 2010). This participant's levels of emotional exhaustion and emotion regulation abilities clearly speak to the complexity of the factors which work together to produce burnout within the context of an educational environment (Chang, 2009; Leithwood et al., 2006). The pre-intervention mindfulness levels for this participant were in the range just below average for demographically-similar non-meditators. Interestingly, this participant scored above average on the observing and describing facets of mindfulness, but below average on acting with awareness, non-judging of inner experience and non-reactivity to inner experience, suggesting that the relationship between stress, emotional exhaustion and mindfulness may be more complex than is reflected by a global mindfulness score. Individual facets, such as acting with awareness, non-judging of inner experience and non-reactivity to inner experience, may be more closely related to stress and emotional exhaustion levels, however further research would be necessary to explore this connection.

This participant attended only three of the six intervention sessions and, therefore, was not considered to have completed minimum attendance requirements for the research. Email correspondence from this participant received as part of the member checking process of this project indicated that she had missed three sessions due to a range of other commitments. She expressed a belief that the mindfulness training she had completed was "really beneficial to (her) at a time when (she) needed to reassess aspects of (her) work life and home life balance" (Participant 6, personal communication, 8 June 2016). However, the underlying message from this participant was that she felt overwhelmed by commitments and she acknowledged that she needed to address this issue. Interestingly, she noted that, while she was unable to commit to the mindfulness intervention, she had made several changes to her life during the intervention period, including reducing her working hours, which had had a beneficial impact on her life. Although previous research (Bernay, 2014)

has found that participants were more likely to use mindfulness in times of extreme stress, the experience of this particular participant suggests that mindfulness strategies may need to be in place prior to extreme stress arising, in order to be useful.

An analysis of the participant sample from this research suggests, then, that there is a middle ground which is required for participants to engage effectively in mindfulness training. Severe levels of stress and emotional exhaustion which are caused by a sense of feeling overwhelmed by commitments may prevent full engagement with mindfulness practice, which may be regarded by potential participants as just another commitment. This finding is supported by research which indicates that heightened stress may result in a level of cognitive impairment (Jonsdottire et al., 2013) which may make it difficult for individuals to effectively engage in a range of activities.

The results of the current research suggest that mindfulness interventions may be most effective for participants who are experiencing some stress or emotional exhaustion, provided they do not feel so overwhelmed by other commitments that they feel unable to commit to some form of regular mindfulness practice. This leaves open the question of how to best meet the needs of those who fall within the range of extreme stress or emotional exhaustion, as practising mindfulness may be incredibly valuable for these educators. There appears to be little documentation in previous research as to the profiles of participants who do not complete mindfulness interventions or the reasons for non-completion. Such evidence may be illuminating as to the type of participant who is most likely to benefit from mindfulness interventions and may be a suitable topic for further research.

5.6 MODES OF PRACTISING MINDFULNESS

An overall glance at the data seems to tell a story of the participants struggling to commit to regular formal mindfulness practice (described in section 2.5.1), choosing to engage in informal mindfulness practices instead. On closer inspection, the individual stories of each of the participants emerge, revealing exceptions to this overall story. Participants 2 and 3 did make a concerted effort to engage in formal practice for the duration of the intervention; participant 2 engaged in formal mindfulness practice on most days and participant 3 engaged in formal mindfulness

practice on average three times per week. In fact, participant 3 noted that he derived benefit from the discipline of the practice itself. In contrast, participant 1 attempted to engage in formal mindfulness practice on a number of occasions but found the process too frustrating (P1:I). Instead, participant 1 chose to focus on incorporating mindfulness into daily activities. Similarly, participant 4 engaged primarily with informal mindfulness practices, focusing on mindfully walking to work and mindful inter-personal communication.

Similarly, the uniqueness of each participant's story is revealed through their preferred choice of mindfulness practice. Breath awareness, body awareness, walking and eating meditations were all popular practices; however, a number of participants noted that there were practices which they did not enjoy. These findings are supported by previous research which has also noted that participants tend to develop their own mindfulness practice in a way that best supports their needs (Bernay, 2014).

From these experiences, a number of points emerge: first, the establishment of a regular pattern of formal mindfulness practice is challenging. Second, despite the challenges inherent in forming a regular formal mindfulness practice, mindfulness seemed to infuse the lives of the participants throughout the course of the intervention. The presence of mindfulness was also evident in the various "mind-shifts" noted by the participants, which resulted in "approaching things differently" (P1:I), and through the adoption of informal mindfulness practices in everyday activities. This points to Jon Kabat-Zinn's (2005) acknowledgement of the capacity of informal practice to assist in the creation of profound shifts in consciousness. Third, for time-poor participants, the creative use of informal mindfulness practices seemed to provide an important entry point into the cultivation into a mindful approach to life. Participant 4 commented, for example, that his intention was: "to be present in as many moments as possible." (P4:J)

The choices made by study participants in terms of how they practised mindfulness raise questions as to the relative benefits of both formal and informal mindfulness practices. As discussed in section 2.5.1, recent studies (Hindman et al., 2015; Sauer-Zavala et al., 2013) have examined the relative outcomes of interventions with different emphases on both formal and informal practices and different expectations as to the dose and frequency of mindfulness practices. Both

formal and informal mindfulness practices appear to create beneficial outcomes, although the research indicates that the precise outcomes depend upon the nature of those practices. Moreover, the dose and frequency of these practices required to create beneficial outcomes is uncertain. The research in relation to these matters is in its infancy but points towards differences in outcomes from various mindfulness practices and suggests the need for further research.

The participant data in relation to ways of practising mindfulness also suggests that there are stages in a practitioner's mindfulness journey. This journey may begin with exposure to ideas associated with mindfulness practice, resulting in a potential practitioner becoming ready and receptive to those ideas. Receptivity may lead to experimentation with small doses of formal or informal mindfulness practices, perhaps enough to create noticeable shifts in ways of thinking about and approaching life. These shifts may result in beneficial outcomes, however minor or transient, ranging from moments of clarity of thought or decreased stress levels to improvements in close personal relationships. An awareness of beneficial outcomes arising from simple changes to routine and insights may then lead to an expansion of practice, either formal or informal, and so the cycle may continue, the novice practitioner eventually becoming a master practitioner. Of course, the underlying story, as told by a collective reading of each of the participant's subjective experiences of mindfulness, is that each person's journey is unique and that each person's needs may be met in different ways. Fortunately, as revealed by each of the current participant's experiences, the practice of mindfulness can be accessed in a range of ways, seemingly limited only by each participant's creativity.

5.7 FUTURE INTENTIONS

5.7.1 Future individual practice

All participants reported a desire to continue with their mindfulness practice and even expand upon their practice, both personally and within the context of the school. In terms of independent personal practice, all of the participants noted that, having experienced the benefits, they would like to introduce an expanded mindfulness practice into their routine. There was a recognition by some participants that their intention to expand upon their mindfulness practice would necessitate finding ways to adapt current routines in order to establish new habits.

Participants suggested a number of ways in which this might take place. Participant 1 recognised that, at this stage in her practice, she would benefit from having some form of external assistance, such as attending a guided meditation class or installing a meditation app on her phone. Similarly, participant 2 reported her intention to continue using the recorded meditations provided as part of the intervention. Participant 4 noted an intention to build upon his current routine of informal mindfulness practices by formalising some of these practices into “rituals”.

There was a strong sense of optimism which pervaded each of the participants’ comments. This optimism is typical of many previous studies into teacher-based mindfulness interventions (e.g. Jennings et al., 2011). However, a number of the participants’ comments seemed to suggest that an element of luck may be necessary in order for their intentions to be met (e.g. P1:I, P3:I) These comments suggest the challenge underlying the establishment of a regular mindfulness practice. This challenge has been noted in previous research (Poulin, 2009) and indicates the need for a strong sense of resolve and commitment to support a regular practice.

5.7.2 Future school-based practice

Participants were also positive about the possibility of incorporating mindfulness into the school culture and suggested a range of ways in which mindfulness practices could be adopted within the school. Participant 2 expressed an interest in using mindfulness techniques in her counselling practice with the young people at the school, while participants 3 and 4 spoke about the possibility of organising a brief but regular formal mindfulness practice for staff either before or after school. These participants saw such a practice as a way to re-centre prior to their work with the young people for the day, or alternatively as a means of re-energising and focusing for the afternoon administrative work required as part of their role. Participant 3 stressed that this would be a voluntary practice but seemed optimistic that the staff would be motivated to continue with the practice: “I believe that there will be energy, certainly there is from me...to continue doing it in one way or another...so I’m assuming it will proceed.” (P3:I) Again, this “assumption” challenges the need for a strong sense of commitment required to institute a regular practice within the school context.

As mentioned earlier, recent research (Schussler et al., 2016) has led to speculation that mindfulness interventions may be most successful when delivered as

a whole school program. This, together with the participants' emphasis on "shared experience" as a factor which was supportive of mindfulness practice, may assist to support the current participants' intentions of future school-based practice. However, as discussed in section 2.5.2, in order to encourage the sustainability of school-based mindfulness interventions, it is critical that participation in these interventions take place on a voluntary basis and, further, that sensitivity be employed to facilitate such participation (Dobkin et al., 2012; Lomas et al., 2015).

In terms of the sustainability of teacher-based mindfulness interventions, the research is characterised by a paucity of longitudinal studies. This makes it difficult to predict the likelihood of sustained mindfulness practice in the current context. However, the few studies which have taken a long-term approach to teacher-based mindfulness interventions (Bernay, 2014; Sharp & Jennings, 2016) provide some reason for optimism, with teachers in those studies continuing to make use of mindfulness practices within the two years following completion of their interventions.

Post-script: Three months after completion of the current mindfulness intervention, the following email correspondence was received from participant 1 in response to an email sent by the researcher as part of the process of member checking. This correspondence provides a foundation for optimism about sustained practice in the current alternative school context:

We just had a reflective day with all staff today and I think that we all seem to be in quite a positive space in our work and lives generally, and we incorporated some mindfulness and meditation into the day. I think our mindfulness course has enabled us to feel more spacious, gentle, able to be patient and present for young people and each other this term. We have had some very pleasing successes with young people of late. I have maintained my quiet daily practice of appreciation of the moment and I have continued to read and explore around the topic, so I do feel that I have experienced sustained benefits.

(Participant 1, personal communication, 11 August 2016)

5.8 PROFESSIONAL DEVELOPMENT

Each of the participants were supportive of the use of mindfulness as a potential professional development tool for teachers. Participants recognised “the unique nature of the stress” of teaching (P1:I), and particularly the emotional work of teaching, as an important motivator for teaching mindfulness as a “self-care” tool for teachers. Participant 2 also commented that mindfulness could be a useful professional development tool for pre-service teachers to help them cope with the challenges of teaching: “When you graduate, you’re not at the top of your game...you’ve just graduated from that particular course. We’re all life-long learners and, if we’re going to keep on making mistakes, then (hopefully) we’re going to keep on learning from them. I think this kind of mindfulness attitude is very much in line with that ...it’s just constant learning.” (P2:I) This insight taps into the capacity of mindfulness to stimulate reappraisal; as such, teachers may come to view set-backs or “failures” in the classroom as essential steps in a more long-term view of learning and progress in the classroom (Skinner & Beers, 2016).

Participants seemed, however, to distinguish between alternative and mainstream schools in their reflections on the use of mindfulness as a form of professional development. This distinction emerged in a number of ways. Participant 4, for example, suggested that, some form of mindfulness practice is necessary in the highly challenging emotional context of the alternative school setting (P4:I). In contrast, participant 1, drawing upon her previous experience of working in a mainstream educational setting, commented that: “(There’s) a bit of a mindset (amongst teachers) ...of wanting to work really hard and...how much they commit themselves to the school and meeting the needs of the students... I just feel like it’s almost a mindset of self-punishment and self-flagellation...in big schools. There’s so much burnout and so much...self-abuse that goes on...there could be resistance with teachers more than with other professions to do something for themselves.” (P1:I) Comments like this may find support in the experience of the participant discussed in section 5.5, who had experienced such high levels of stress and emotional exhaustion that the additional pressure of participating in the mindfulness intervention was too overwhelming to consider. Previous studies have also noted the struggle of educators to practice self-care and the sense that engaging in self-care might raise “unspoken

expectations” of colleagues who seemed to “take pride in using all their free time for work” (Schussler et al., 2016, p. 137).

Interestingly, participants commented upon the importance of the potential flow-on effects to students as a motivation for incorporating mindfulness in teacher professional development programs. Participant 3 suggested that providing simple exercises to use with students would be a “hook” for teachers and would create ways of turning mindfulness, which is in many ways a personal journey, into an external group practice, “which is ultimately what teachers do.” (P3:I) There is a growing body of evidence which supports the use of mindfulness in student populations (e.g. Albrecht et al., 2012; Meikeljohn et al., 2012). More specifically, recent research has emerged to support the use of mindfulness for adolescents in alternative school settings due to its apparent ability to yield benefits in the areas of intrapersonal and interpersonal skills (Wisner & Starzec, 2016). While this research is heartening, in another respect, sadly, the implication underlining these comments from the current participants is that self-care alone may not be sufficient reason to engage in mindfulness practice for teachers.

5.9 CONCLUSIONS

Previous research into the relationship between mindfulness and teacher well-being has been promising, but there is still debate concerning the processes which lead to the most beneficial outcomes of mindfulness interventions. Moreover, there has been limited research focusing on the use of mindfulness for teachers in alternative schools. This study helps to fill this gap in the research by exploring the perceived impact of mindfulness as a strategy to support the emotional work of teachers in an alternative school context. The outcomes of this study are predominantly positive and suggest certain implications for the future use of mindfulness as professional development within an alternative education context. These findings are, however, subject to a number of limitations, which are detailed in the following section.

5.9.1 Limitations

A number of limitations inherent in the current research design impact upon the generalisability of this study’s findings. First and foremost, the small sample size of four participants clearly affects the generalisability of the study’s findings, as does

the school-specific context of the study, which limits transferability to other contexts, including other alternative school contexts. Due to the small sample size and lack of experimental design, the study is not able to present conclusions of any statistical significance. Thus, the study cannot conclusively suggest that there is a causal connection between the mindfulness intervention and the outcomes of this study, which included improvements on measures of stress, emotional exhaustion, emotion regulation and mindfulness. However, it is submitted that, as a case study, generalisability is not a key driver behind the research. Rather, this case study was designed to provide a rich description of the case under examination, which it has presented in the preceding chapters. In support of this approach, Silverman (2010, p. 147) suggests that, “Generalisability is present in a single case - the basic structures of social order are to be found anywhere...the possibility something exists is enough.”

The fact that the study sample consisted exclusively of volunteers may also have biased the study’s results. The use of volunteer samples is typical of educational research and raises questions as to whether beneficial outcomes would also be observed in non-volunteer samples.

A further limitation of the study is the possibility that social desirability bias affected the validity of the study’s findings (“Social Desirability Bias”, 2005). This bias may have been compounded due to the primary researcher also taking on the role of mindfulness facilitator, potentially resulting in additional incentive for participants to report favourable results. Social desirability bias is inherent in the study’s use of predominantly subjective data consisting of self-report survey measures, journal reflections and interviews. The process of reflection itself, through written journal entries and spoken interview responses, may have encouraged a bias towards participant realisation of beneficial mindfulness experiences. This may have resulted in an amplification of positive outcomes as some of the benefits experienced by the participants were subtle and, without reflection, may not have been acknowledged. However, the study also asked participants to reflect on potentially personal experiences and this may have resulted in a degree of self-censorship due to the awareness that these reflections were being collected as data. In order to address these forms of bias, all possible steps were taken to ensure that participants felt comfortable revealing their experiences in a genuine and authentic way during both

the journal reflections and the interview process, for example, by engaging an independent interviewer to conduct participant interviews. In addition, by conducting the questionnaire on multiple occasions, at pre- and post-intervention, the possibility of social desirability bias was further minimised.

The study was also limited by the challenges inherent in measuring mindfulness as a construct. These challenges stem from lack of clarity relating to definition of the construct, differences between respondents in understanding of scale items and the inherent limitations of self-report measures. These limitations were discussed in section 3.5.1. Furthermore, recent research published subsequent to this study's data collection period, found that the FFMQ failed to show discriminant validity (Goldberg et al., 2016). Despite these weaknesses, it is submitted that the use of the FFMQ has assisted in providing a concise profile of the respondents' perceptions of their own mindfulness levels which assisted in analysing data relevant to the current research.

Finally, time constraints imposed by the research design limited the ability to collect follow-up data in relation to the mindfulness intervention implemented as part of this study. While the study purports to make suggestions as to factors which may support the sustainability of mindfulness interventions, at least in the context of alternative schools, the lack of longitudinal data limits conclusions which can be made as to long-term sustainability of benefits. Despite these limitations, the available data offers rich descriptions of the current participants' experiences of a mindfulness intervention and assists in creating a fuller understanding of the role of mindfulness in supporting the emotional work of teachers in alternative schools.

5.9.2 Contribution to the research

This study has built upon previous research into the use of mindfulness interventions to support the emotional work of teachers and to assist in the management of teacher stress. The study's methodological contribution to the current body of research lies in its confirmation of a mixed methods approach as invaluable in this field of research. The combination of qualitative and quantitative data used in this study allowed, simultaneously, for a precise quantitative snapshot of participant experiences together with in-depth discussion of those experiences which informed the interpretation of quantitative data. This approach allowed for a deeper

understanding of participant experiences which is critical due to the necessarily subjective nature of participant experiences of mindfulness interventions.

The study also makes an empirical contribution to the research. Overall, the study supports the general trajectory of previous research which reveals the positive outcomes of mindfulness interventions. The study also lends some certainty to areas in previous research where inconsistent results have emerged, for example, in terms of outcomes related to emotional exhaustion. Participants in this study experienced beneficial outcomes on measures of mindfulness, emotion regulation ability (cognitive reappraisal), stress and emotional exhaustion. While the research design does not enable a claim of causality, the data suggests that the mindfulness intervention resulted in decreased stress, decreased emotional exhaustion, increased cognitive reappraisal and increased mindfulness (RQ1). The outcomes on the suppression factor of emotion regulation were less clear-cut and suggest the need for further research to clarify the role of suppression as an emotion regulation strategy, particularly within the potentially volatile emotional environment of an alternative school context.

In terms of a theoretical contribution to the research, the study was informed by a model which suggests that mindfulness may lead to emotion regulation strategies which result in more beneficial outcomes than response-focused strategies which are often based on habitual patterns of emotional reactivity. The model suggests that a model of mindful emotion regulation may result in greater benefits in terms of physical, cognitive, social and emotional indicators. Participants to the current study did, in fact, describe positive outcomes on each of these indicators of well-being. Thus, the study is both informed by, and lends support to, the current theoretical framework. The theoretical framework underlying previous teacher interventions has only recently emerged as a focus of research. Thus, this study is also significant in its application of this framework to the case of teachers, particularly alternative school teachers.

The study also lends support to emerging research into the mechanisms underpinning mindfulness. Current research suggests that attention regulation, interoception, emotion regulation and detachment are key factors underpinning beneficial outcomes arising from mindfulness interventions. Through qualitative participant data, each of these factors - attention regulation, interoception, emotion

regulation and detachment – emerged strongly as themes in the current study. Arguably, these results take the research one step closer to a comprehensive and integrated theoretical model of mindfulness which was a secondary purpose of this study.

Interestingly, analysis of the qualitative data revealed greater benefits in personal rather than professional areas of the participants' lives. These findings may be due to the particular qualities of alternative school teachers who arguably need to embody qualities of mindful emotion regulation in their interactions with students. Certainly in the current study, these teachers demonstrated high mindfulness and positive emotion regulation scores even prior to the mindfulness intervention. Moreover, previous research indicates that these qualities may be typical of alternative school teachers. Despite these interesting findings, the current study is one of very few studies into the use of mindfulness and alternative school teachers. Further research into the impact of mindfulness interventions for alternative school teachers is warranted, with a particular focus on the impact of these interventions on teacher-student relationships.

The study also raises questions as to which teachers are most likely to benefit from mindfulness interventions. Combined with findings from previous research, the current study suggests that a complex range of factors – including school support, individual life circumstances and individual predispositions to mindfulness, stress and emotion regulation – interact to determine the outcomes of mindfulness interventions. The study suggests that participants suffering from severe levels of stress or emotional exhaustion, may feel too overwhelmed to fully engage with an intervention. This leaves open the question of how best to meet the needs of those teachers falling within the range of extreme stress or emotional exhaustion, who potentially stand to derive the most benefit from mindfulness. This suggests that, in some instances, mindfulness may be more useful as a proactive strategy rather than as a remedial strategy; that is, mindfulness may be most effective in establishing strategies for preventing the development of severe stress or emotional exhaustion. By extrapolation, mindfulness may be a useful form of training for pre-service teachers, who are often most prone to job-related stress and burnout, in order to assist in the proactive prevention of early career burnout. These related issues may be suitable areas for future research.

The empirical interview data also adds to an understanding of the ways in which alternative school teachers perceived the barriers to mindfulness practice (RQ3). While a number of previous studies (Bernay, 2014; Sharp & Jennings, 2016) have undertaken long-term follow-up of intervention outcomes, very few studies have explicitly explored the barriers to sustainability of mindfulness practices from the perspective of teacher participants. Participants commented on a range of barriers, both internal and external to practice, including factors related to time, organisation, commitment and frustration with practice. A theme of resistance to practice also emerged from participant comments, implying a tension felt by teachers around conflicting desires to meet the needs of students as well as the need for self-care. This theme has implications for the development of mindfulness interventions in terms of motivating teachers who experience this resistance to self-care.

Despite these barriers, study participants were overwhelmingly positive about the use of mindfulness as a professional development program within an alternative school context. Based on both the qualitative and quantitative data, mindfulness interventions may be effective for the prevention and management of stress and burnout due to the high emotional intensity of working within an alternative school context. Moreover, mindfulness practice mirrored the focus on communication, collaboration and reflective practice which was evident in this particular flexi-school. The study therefore suggests that mindfulness interventions are particularly suited to the context of alternative schools which prioritise relational ways of educating.

The study also revealed a number of factors identified by participants as supportive of practice, including the importance of mindfulness as a shared professional development experience. Study participants were also supportive of the customised structure of the mindfulness intervention implemented as part of this study. The notion of prior exposure to concepts related to mindfulness also emerged as important to cultivating participant acceptance of mindfulness as a professional development opportunity.

Another theme which emerged was the unique modes of practising mindfulness developed by each participant. Participants engaged in both formal and informal mindfulness practices and, for participants who were time-poor, informal mindfulness practices stood out as an accessible pathway into mindfulness practice. An associated issue raised by this study and previous research was the dose and

frequency of practice needed to experience beneficial outcomes. This is an important question to be addressed by further research.

The focus on factors which can support mindfulness practice is an area which has been largely overlooked in previous research and is thus a significant contribution of the current study. Based on the findings from this study, a number of implications arise concerning the use of mindfulness in effective teacher professional development programs, at least within the context of alternative education programs. These implications form the basis of the following section which details recommendations made as a result of the current study.

5.9.3 Recommendations

Given the current state of the research, further research into the use of mindfulness interventions with alternative school teaching populations is recommended. Based on the results of the current study, future research should consider exploring mindfulness-based interventions which are customised specifically for the needs of teachers and which also include establishment of effective supports within the workplace. As such, mindfulness training interventions may benefit from:

- Implementation as a whole school program accessed by staff on a voluntary basis;
- Staged implementation allowing gradual exposure to mindfulness-based concepts;
- Supported training sessions led by a trained facilitator;
- On-site delivery of training;
- Flexible delivery of training in relation to timing of sessions, including repeated sessions where possible;
- Reminders for practice, such as visual cues, email reminders and recordings of guided mindfulness practices;
- Incorporation of a variety of strategies for practising mindfulness, including formal and informal practices;

- Alignment of content with core teacher values, including incorporation of information as to how teacher wellness can impact upon student outcomes; and
- Follow-up sessions to provide continued support for practice.

The current study suggests that these factors may have assisted in providing accessible pathways for the alternative school teachers participating in the study to experience the potentially beneficial outcomes of mindfulness interventions. Future research may explore whether these recommendations are transferable to the general population of alternative school teachers, and further, to teachers in mainstream schools. These findings may, thus, be of significance to a wide range of educational bodies, including alternative schools, Education Queensland, Brisbane Catholic Education, Independent Schools Queensland, teacher unions, professional associations, and various other institutional bodies. Customisation of mindfulness interventions in the ways suggested by this study may have far-reaching effects, particularly if implemented at the institutional level. The development of mindfulness interventions according to these recommendations may present a practical, cost-effective solution to the problem of teacher stress, which simultaneously supports the important emotional work which teachers perform. These recommendations, therefore, have the potential, not only to beneficially influence teacher well-being, but also to positively impact on the well-being of future generations of students.

5.9.4 Recommendations for further research

Based upon the findings of this study, the following areas may be avenues for possible future research:

- The relationship between cognitive and emotional benefits which may stem from mindfulness practice;
- The impact of mindfulness interventions in other alternative school settings;
- The impact of mindfulness on teacher-student interactions, particularly in alternative school settings;

- The role of suppression as an emotion regulation strategy, particularly within the potentially volatile emotional environment of an alternative school context;
- The relative distinctions between non-reactivity (FFMQ) and suppression (ERQ), particularly as related to the wording of relevant items of the FFMQ and the ERQ;
- The relative relationship of individual facets of the FFMQ (such as acting with awareness, non-judging of inner experience and non-reactivity to inner experience) to stress and emotional exhaustion levels;
- Gender differences in terms of resistance to meditation;
- Gender preferences for social support in relation to school-based mindfulness practices;
- The dose and frequency of mindfulness practice required for beneficial outcomes;
- Differences in outcomes as a result of various mindfulness practices;
- The relative benefits and disadvantages of online delivery of mindfulness training for teachers;
- Significance or otherwise of the profiles of participants who do not complete mindfulness interventions and their reasons for non-completion;
- The type of participant who is most likely to benefit from mindfulness interventions;
- How best to meet the needs of those teachers falling within the range of extreme stress or emotional exhaustion, who potentially stand to derive the most benefit from mindfulness;
- Whether mindfulness is more useful as a proactive strategy rather than as a remedial strategy;
- The most appropriate form of mindfulness-based intervention as customised specifically for the needs of teachers, as well as various sub-categories of teachers, such as alternative school teachers.

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Appendices

- A. Demographic Questionnaire
- B. DASS21 (stress sub-scale)
- C. Maslach Burnout Inventory (emotional exhaustion sub-scale)
- D. Five Facet Mindfulness Questionnaire
- E. Emotion Regulation Questionnaire
- F. Interview Protocol - Post-Intervention

Appendix A: Demographic Questionnaire

NAME:

DATE OF BIRTH:

GENDER:

EDUCATIONAL QUALIFICATIONS:

YEARS OF TEACHING EXPERIENCE:

BRIEF DESCRIPTION OF YOUR TEACHING ROLE:

Appendix B: DASS21(stress sub-scale)

The following questions are from the DASS21 (stress sub-scale) and are designed to rate your current stress levels. Please read each statement and choose the most appropriate response to describe your experience from the previous week.

	Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree, or a good part of the time	Applied to me very much, or most of the time
	0	1	2	3
I found it hard to wind down				
I tended to over-react to situations				
I felt that I was using a lot of nervous energy				
I found myself getting agitated				
I found it difficult to relax				
I was intolerant of anything that kept me from getting on with what I was doing				
I felt that I was rather touchy				
TOTAL SCORE				

Adapted from Lovibond, P. & Camilleri, L. (2014, November 10). *Depression Anxiety Stress Scales (DASS)*. Retrieved from <http://www2.psy.unsw.edu.au/dass/>

Appendix C: Maslach Burnout Inventory - (emotional exhaustion sub-scale)

The following questions are samples from the Maslach Burnout Inventory (MBI) which is the most commonly used tool to assess whether you might be at risk of burnout. This questionnaire only includes the emotional exhaustion sub-scale. Please read each statement and choose the most appropriate response to describe your experience.

	Never	A few times per year	Once a month	A few times per month	Once a week	A few times per week	Every day
	0	1	2	3	4	5	6
I feel emotionally drained from my work.							
I feel frustrated by my job.							
I feel like I'm at the end of my rope.							
TOTAL SCORE							

Adapted from Maslach, C., Jackson, S. E., Leiter, M. P., Schaufeli, W. B. & Schwab, R. L. (2015). *Maslach Burnout Inventory*. CA, USA: Mind Garden, Inc. Retrieved from www.mindgarden.com

Appendix D: Five Facet Mindfulness Questionnaire

The following questions are from the Five Facet Mindfulness Questionnaire which rates your current levels of mindfulness. Please read each statement and choose the most appropriate response to describe your experience.

	Never or very rarely true 1	Rarely true 2	Sometimes true 3	Often true 4	Very often or always true 5
1. When I'm walking, I deliberately notice the sensations of my body moving.					
2. I'm good at finding words to describe my feelings.					
3. I criticise myself for having irrational or inappropriate emotions.					
4. I perceive my feelings and emotions without having to react to them.					
5. When I do things, my mind wanders off and I'm easily distracted.					
6. When I take a shower or bath, I stay alert to the sensations of water on my body.					
7. I can easily put my beliefs, opinions, and expectations into words.					
8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.					
9. I watch my feelings without getting lost in them.					
10. I tell myself I shouldn't be feeling the way I'm feeling.					
11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.					
12. It's hard for me to find the words to describe what I'm thinking.					
13. I am easily distracted.					
14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.					
15. I pay attention to sensations, such as the wind in my hair or sun on my face.					
16. I have trouble thinking of the right words to express how I feel about things.					
17. I make judgments about whether my thoughts are good or bad.					
18. I find it difficult to stay focused on what's happening in the present.					
19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.					
20. I pay attention to sounds, such as					

clocks ticking, birds chirping, or cars passing.
21. In difficult situations, I can pause without immediately reacting.
22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.
23. It seems I am "running on automatic" without much awareness of what I'm doing.
24. When I have distressing thoughts or images, I feel calm soon after.
25. I tell myself that I shouldn't be thinking the way I'm thinking.
26. I notice the smells and aromas of things.
27. Even when I'm feeling terribly upset, I can find a way to put it into words.
28. I rush through activities without being really attentive to them.
29. When I have distressing thoughts or images I am able just to notice them without reacting.
30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.
31. I notice visual elements in art or nature, such as colours, shapes, textures, or patterns of light and shadow.
32. My natural tendency is to put my experiences into words.
33. When I have distressing thoughts or images, I just notice them and let them go.
34. I do jobs or tasks automatically without being aware of what I'm doing.
35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.
36. I pay attention to how my emotions affect my thoughts and behaviour.
37. I can usually describe how I feel at the moment in considerable detail.
38. I find myself doing things without paying attention.
39. I disapprove of myself when I have irrational ideas.

Scoring Information:

Observe items: 1, 6, 11, 15, 20, 26, 31, 36
 Describe items: 2, 7, 12R, 16R, 22R, 27, 32, 37
 Act with Awareness items: 5R, 8R, 13R, 18R, 23R, 28R, 34R, 38R
 Nonjudge items: 3R, 10R, 14R, 17R, 25R, 30R, 35R, 39R
 Nonreact items: 4, 9, 19, 21, 24, 29, 33

Adapted from Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27- 45

Appendix E: Emotion Regulation Questionnaire (ERQ)

The following questions form the Emotion Regulation Questionnaire (ERQ) which is a scale designed to measure your emotion regulation tendencies. Please read each statement and choose the most appropriate response to describe your experience.

		strongly agree		neutral			strongly disagree
	1	2	3	4	5	6	7
When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.							
I keep my emotions to myself.							
When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.							
When I am feeling positive emotions, I am careful not to express them.							
When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.							
I control my emotions by not expressing them.							
When I want to feel more positive emotion, I change the way I'm thinking about the situation.							
I control my emotions by changing the way I think about the situation I'm in.							
When I am feeling negative emotions, I make sure not to express them.							
When I want to feel less negative emotion, I change the way I'm thinking about the situation.							
TOTAL SCORE							

Adapted from Gross, J.J. & John, O.P. (2003) Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.

Appendix F: Interview Protocol - Post-Intervention

Date:

Time:

Interviewee:

Position of Interviewee:

Thank you for agreeing to be interviewed.

My name is [name of interviewer] and I am an independent social researcher.

The purpose of this interview to contribute to existing research into mindfulness as a strategy to enhance the emotional work of educators.

The specific research questions for the project are:

1. What are teachers' mindfulness, emotion regulation, emotional exhaustion and stress levels pre- and post- a mindfulness intervention?
2. How do teachers perceive the impact of a mindfulness-based intervention as a strategy to manage stress and support the emotional work of teaching?
3. What are the perceived barriers to mindfulness practice?

This is a voluntary interview, if you feel uncomfortable, or would like to stop or withdraw, you can do so, at any stage

This interview will be audio-recorded; both the audio recording and transcriptions of the interview will be made available to the research team.

To protect your confidentiality data will be de-identified once matched with journal and questionnaire data.

It is anticipated that this interview will take approx. 30-45 minutes.

Do you have any questions?

1. Could you please describe your role at the [name of institution] Flexible Learning Centre? How would you describe the emotional demands of the job?
 2. What experience of mindfulness have you had prior to this mindfulness training course?
 3. Have you experienced any benefits, professionally or personally, since starting the mindfulness course, which you attribute to the course?
 - (a) professionally? e.g. Has mindfulness changed the way you teach? Has mindfulness changed the way you interact with your students?
 - (b) personally?
 4. What aspects of the course or mindfulness strategies did you find:
 - (a) most helpful?
 - (b) most difficult?
 5. How would you describe the overall feasibility of the course in the context of your school and personal life? (i.e. suitability, practicality, convenience) Does it (the course) work within this context?
 6. Do you think your stress levels have changed since participating in the mindfulness course? If so, how?
 7. What does (the term) 'emotional state' mean to you? Has your general emotional state changed since participating in the mindfulness course? If so, how? e.g. have you noticed any differences in emotional interactions with the young people/ colleagues/personal relationships?
 8. Has your ability to cope with stress and the emotional work of teaching changed since participating in the mindfulness course either at school or in your personal life? If so, how?
 9. Has your general sense of well-being changed at all since participating in the mindfulness course? If so, how?
 10. How would you describe your ability to remain mindful since participating in the mindfulness course, particularly at school?
 11. On average, how much time did you spend in daily home practice throughout the course?
 12. Are you likely to continue with your mindfulness practice? Why or why not?
 13. Did you experience any barriers to practicing mindfulness?
 - (a) If so, what sorts of barriers did you experience?
 - (b) Do you have any strategies/ideas for addressing these barriers?
 14. (a) Do you think mindfulness should be used in professional development programs for teachers in schools? If so, how? If not, why not?
 - (b) What steps could be taken to make these programs:
 - i. more accessible for teachers?
 - ii. more effective for teachers?
- Thank them for their participation.
 - Assure them of the confidentiality of the responses.
 - Advise them that the researcher will provide them with a summary of the research results.