

# **Chapter 1: Emotional Intelligence and Learning: Background to the study**

## **1.1 The management of emotions in learning**

As a teacher with over thirty-six years' experience in a classroom environment I have observed how students learn, how effective classroom teachers teach and the ways in which the school executive can impact on the learning environment. My different roles have included:

- classroom teacher, Learning and Support Teacher and Head Teacher in public comprehensive co-educational high schools
- educational leader at school and district level with responsibility for teacher professional development
- NSW Board of Studies Liaison Officer (BOSLO)
- Deputy Principal in a low-fee co-educational independent school implementing educational change.

From these experiences I became aware of the need to increase the engagement of students in learning and to inspire staff to participate in effective professional learning and educational change. My work experience and teaching have led me to wonder about a possible link between successful learning and aspects of 'Emotional Intelligence' (Goleman, 1996). 'Good learners' and 'great leaders' seem to have strengths in managing their own emotions and the emotions of others. Poor learners, struggling teachers and poor leaders appear to lack these skills.

Students who manage their own emotions and manage the emotions of others effectively appear to be able to focus on learning, have a positive attitude towards learning, make an

effort to learn and perform better. Students who cannot manage their own emotions or manage the emotions of others in class generally appear less able to focus on learning, to be less motivated and to perform poorly in their academic work. Emotional Intelligence (EI) strategies are not widely taught in secondary schools. The acquisition of these skills can be haphazard and indiscriminate. Some students have them in their 'learning toolbox', perhaps having learned them at home. It appears that many students may not have acquired these skills. Schools can take a greater role in teaching students EI strategies as the benefits of students being able to manage emotions when learning are observable.

## **1.2 Emotional Intelligence**

As an educator and parent my interest in Emotional Intelligence in learning began in the late 1990s after reading Goleman's (1996) *Emotional Intelligence: Why It Can Matter More Than IQ*. My fascination with Emotional Intelligence was a seed that germinated into my quest to research the importance of Emotional Intelligence in the learning process. I wondered whether an awareness of Emotional Intelligence and use of Emotional Intelligence strategies would have any impact on student and teacher learning through their effect on Attitude, Effort and Performance (indicators of learning used in my school context).

The concept of Emotional Intelligence was deemed to be 'populist' and therefore dismissed by many in the late 1990s (Zeidner, Matthews & Roberts, 2009). After his first book was criticised as setting out a 'laundry list' of desirable qualities bar cognitive intelligence, Goleman (1998) then argued that emotional competencies could be learned capabilities and these learned skills could translate directly into success in various social domains (Zeidner, Matthews & Roberts, 2009).

In the early 2000s as an educational leader and working in senior executive roles in schools I was exposed to discussion of the usefulness of Emotional Intelligence, as it featured in

leadership and organisational learning literature (Goleman, Boyatzis & McKee, 2003). As a construct Emotional Intelligence also appeared to be gaining more academic acceptance (Matthews, Zeidner & Roberts, 2007). Matthews, Zeidner and Roberts suggest the term 'emotional intelligence' should combine the ideas that emotions can make thinking more intelligent and that one can think intelligently about emotions. They also state there is sufficient evidence that 'a focus on EI may be relevant to enhancing personal, social and organisational functioning' and 'emotional functioning, especially in education' (pp. 28–29).

Accompanying my curiosity about Emotional Intelligence was my growing awareness of the research into how the brain 'learns'. Facilitating learning is my *raison d'être* as a teacher. A decade of neuroscience, and emotional and social intelligence research, has challenged notions of how we learn: 'All learning implies a change in the brain, a strengthening of a synaptic connection' (Goleman, 1996, p. 227). The ability of the brain to change and grow new pathways — 'plasticity' of the brain — came to popular attention in Doidge (2007, pp. 218–224) who cited Eric Kandel's 2000 Nobel prizewinning research: through learning we change our brains and can 'change the way we think'.

I acknowledge my understanding of current brain research is filtered by endeavouring to tease out the implications for educators. I am not a neuroscientist and I am also not a psychologist; however, as a teacher I felt that this new research had implications for classroom practice that needed to be explored. My research does not try to measure Emotional Intelligence (as a psychologist would do) or even show Emotional Intelligence on an fMRI/functional magnetic resonance imaging machine (as a neuroscientist might do), but instead investigates whether the knowledge emanating from these disciplines can improve my practice and student learning. My research is therefore not specifically based in psychology or neuroscience. It is based in education, and for the context of this research the secondary classroom.

My classroom teaching experience suggests that if aspects of Emotional Intelligence are not managed well and not understood by both teachers and students, then there can be a negative impact on learning. There seems to be a very powerful connection between the management of emotions, of everyone in the classroom, and a productive learning environment. Recent research confirms earlier findings that classroom misbehaviour is of widespread concern to teachers, with the main and frequent causes of disruption being talking out of turn and hindering other students (Beaman, Wheldall & Kemp, 2007).

Schutz, Pekrun and Phye (2007) feel there have been too few studies to provide an opportunity for a synthesis of evidence to inform pedagogy in authenticated ways regarding how to address 'emotions'. They note that 'more direct evidence on educational interventions is still largely lacking' (p. 237), and 'the best of researchers' efforts will be required to successfully design and implement interventions targeting emotions such that educational research on emotions can inform educational practitioners, administrators and policy makers on how they might be able to shape classroom instruction and educational institutions in affectively productive ways' (p. 238).

A positive response to a presentation of my research proposal to the Transfer Centre for Neuroscience and Learning at the University of Ulm in Germany ([www.znl-ulm.de](http://www.znl-ulm.de)) in December 2011 reinforced my conviction that there is a place for Emotional Intelligence strategies in the learning process. Dr Katrin Hille and her colleagues' encouragement of my research reflected the Transfer Centre's belief that emotions have an important place in learning.

I was motivated to enhance the existing research on emotions and pedagogy. From my classroom experience as a teacher and as a learning consultant I was impressed with the

effectiveness of using scaffolding to support students' learning in cognitive tasks. These experiences encouraged me to develop a scaffold linking Emotional Intelligence with learning in the classroom. By incorporating various teacher-developed resources I developed an emotional intelligence scaffold that was indeed similar to those scaffolds designed to teach a cognitive concept. I believe students require scaffolding for emotional work in the classroom, particularly as emotions shape our cognitive interactions, especially in the secondary school classroom.

The school in which the research took place is a geographically isolated, co-educational, regional, government high school of 187 students, where the researcher is employed as a '0.4' (2 days per week) temporary Learning and Support Teacher (LaST). This research fits with the researcher's workplace job brief to support learning. The school has been given the pseudonym of 'Plateau High'.

### **1.3 Reflective Practice and the research context**

The opportunity to reflect on my practice and research the importance of Emotional Intelligence and learning came after thirty-six years of experience. Day (as cited in Leitch & Day, 2000, p. 183) observes:

Teachers may reflect in differing ways at different times. It is important, therefore, to recognise the impact of teachers' positions in their career and life cycle, and the effects of the organisational and cultural contexts in which they work if opportunities for their professional growth are to be maximised.

I currently have the flexibility and the imprimatur to research quality teaching practices in my role as a LaST within the school. In this role I provide professional specialist advice, support and mentoring to classroom teachers. I also have the opportunity to encourage teachers to recognise the importance of action research to gain first-hand evidence and research their

own practice. (See Appendix A for a description of the official role of a LaST.)

A LaST uses many models of intervention to support students and quality teaching. One may go into a class and work with a student who has a particular learning issue or work with other students in the class whilst the classroom teacher works more closely with the individual student. Withdrawing students from class for learning assistance is another teaching and learning strategy that is used to support the learning of students. A LaST may also lead the delivery of a lesson or professional learning, modelling a quality teaching and learning strategy to encourage professional growth in other teachers.

To continue my growth as a teacher and leader of professional learning, I needed to investigate the importance of Emotional Intelligence and learning with the collaboration of others inside my school, and others outside the school with expertise in research methods. Action research is my methodology of choice, as it enabled me to critically examine classroom teaching principles in order to enhance learning through a reflective lens. Action research by teachers in schools is described by Mills (2011, p.5):

as any systematic enquiry conducted by teacher researchers...in the teaching/learning environment to gather information about...how they teach and how well their students learn. This information is gathered with the goals of gaining insight, developing reflective practice, effecting positive changes in the school environment (and on educational practices in general) and improving student outcomes and the lives of those involved. Action research is done *by* teachers *for* themselves; it is not imposed on them by someone else. Action research engages teachers in a four-step process:

1. Identify an area of focus
2. Collect data

3. Analyse and interpret data
4. Develop an action plan.

Action research is also an extension of reflective practice and quality assurance in the professional workplace. Leitch and Day (2000, p. 179) argue 'action research' and 'reflective practice' are critical dimensions of the professional development of teachers:

Reflective practice is considered to be central to the growth of teachers as inquirers who engage in collaborative research with others from inside and outside the school in generating knowledge of practice rather than finding themselves as objects whose role is to implement existing theory in practice (Peters, 1985).

My action research journey began with a review of the literature as part of my 'reconnaissance' (Mills, p. 42) to establish the importance of Emotional Intelligence in learning and how it worked in practice. Research on implementation of social and emotional learning programs has confirmed that they contribute to improved academic performance (Greenberg et al., 2003; Zins, Bloodworth, Weissberg & Walberg, 2004; Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2011). The research shows that Emotional Intelligence is important in learning, but how does it work in practice? The gap in the literature is in practice (Ferrara, 2011). My project endeavours to fill this gap in understanding. How does it work in practice for students from different starting points in the same classroom who have different needs but all require some application of Emotional intelligence?

The literature review led me to further explore 'promising practices' that might be used in classrooms to correct a problem (Mills, p. 44). I decided to prepare a series of lessons to teach Emotional Intelligence strategies to students in the form of a scaffold to manage their

emotional stance and enhance their learning in the classroom. My lessons would be based on some strategies of Lantieri and Goleman (2008) *Building emotional intelligence: Techniques to cultivate inner strength in children*; Panju (2008) *7 Successful strategies to promote emotional intelligence in the classroom*; and Dommett, Devonshire and Churches (2011) *Learning and the brain pocketbook: Combining knowledge and insight from neuroscience with practical classroom strategies to develop better learners*.

Thus Emotional Intelligence Scaffolding to Improve Learning (EISIL) was designed as an educational intervention to assist students to manage their emotions for learning. The research aimed to determine whether Emotional Intelligence strategies could be perceived to improve student learning; and specifically, to identify whether an understanding and a conscious application of EISIL could lead to improved learning as perceived by the students and their teachers.

#### **1.4 Importance of this study**

In the educational community the strong belief in the superiority of IQ as a predictor of successful learning continues. There is still considerable debate around why EI may play a more important role in learning than IQ. There appears to be a lack of teacher professional learning about Emotional Intelligence and a lack of knowledge about applying EI strategies in learning. This is a study examining the usefulness of EISIL and determining its effectiveness in the learning process. It may assist teachers to develop a deeper understanding of the role of emotions in teaching as well as in learning and thus lead to changes in pedagogy. In addition, this study aims to contribute to the literature on Action Research in a school setting, thereby contributing to the lesser developed research tradition of a teacher carrying out his or her own research rather than being the object of other researchers.

The emotional intelligence climate in which teachers work is challenging. For example, teachers need to deal with misbehaviour; with distractions such as laptops, tablets and mobile phones; and with adjusting the curriculum for students with identified needs who are now in the mainstream classroom. Successful strategies to help students manage their emotions could make an important contribution to student learning and also to teacher professional learning.

## **1.5 Conclusion**

The value of using Emotional Intelligence strategies to improve learning needs to be further explored and adequately assessed through valid documented research. This study focuses on documenting the impact of an intervention, 'EISIL', on student learning outcomes, specifically, their Attitude, Effort and Performance. It contributes to the literature examining the use of Emotional Intelligence scaffolding to improve learning in a manner not previously undertaken.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

This chapter reviews literature on the role of emotions in learning and the concept of Emotional Intelligence (EI) and its importance in learning. The review explores where EI has been considered in education and how a focus on EI in education can impact on learning. The concept of 'scaffolding' as an effective teaching and learning tool to improve cognitive learning is introduced to provide a platform for the subsequent development of an EI scaffold to support learning.

### **2.2 Emotions and Learning**

Neuroscientific research is beginning to explain why emotions have an impact on learning. Research by Le Doux (1998) on the amygdala and emotional reaction and Bar-On (2007) on brain circuitry for emotional intelligence suggests emotions are important in decision-making. The emotion of fear originates in the 'reptilian' part of the brain (in the amygdala) and the way the limbic system responds to this signal can result in the amygdala 'hijacking' (Goleman, 2011) the neocortex. The neocortex is the 'thinking' and decision-making part of the brain; if emotion significantly affects the neocortex, learning can be affected (LeDoux, 2003; Goswami, 2004).

Students can be at the mercy of their emotions in the classroom, often evidenced in behavioural terms, and we are beginning to see why emotions can 'hijack' cognitive activity (Beaman, Wheldall & Kemp, 2007). Recent research about the influence of the limbic system over the neocortical area of the brain is important to teachers' pedagogy because it increases teachers' awareness of how the brain 'learns' and establishes the link between emotions and learning. Such research information is profoundly important for the classroom as a place of learning because it highlights the role of affective as well as cognitive factors in

the learning process. The following discussion summarises what is currently known about the link between emotions and learning.

The role of emotions in learning and how emotional processes relate to learning and memory were addressed by a research group for fMRI at the Transfer Center in Ulm, Germany (OECD, 2008). This research group examined brain activity with fMRI during the encoding of neutral words learned in a positive, neutral or negative emotional state. They found that words were encoded in different places in the brain depending on the emotional context in which the encoding of words took place. The most successfully remembered words were encoded in a positive emotional state. The researchers also showed that activity in different brain regions depended on the emotional context when words were learned, and the location of the activity in the brain predicted whether or not the word was remembered.

Words that were encoded when the learner was in a positive emotional state caused activity in the hippocampus. Words encoded when the learner was in a negative emotional state showed activity in the amygdala. The frontal cortex was activated when words were delivered in a neutral context. It appears that material is stored in different parts of the brain depending on the emotional context in which it is received. These results show that when a person feels good and self-esteem is heightened, learning is most successful. Newly 'learned' material is stored temporarily in the hippocampus, but ultimately this material will finally rest in the cortex, the brain's long-term memory storage device. The importance of emotions in learning is a significant finding for all educators.

Any stimulus coming into the brain — visual, auditory, olfactory — is received by the amygdala directly from the sensory areas prior to this signal reaching the decision-making areas of the frontal cortex (Geake, 2009). When the amygdala becomes overstimulated by stress, information cannot pass from sensory awareness into the memory connection and

storage regions of the brain. This result can be seen when brain activity during learning is visualised on fMRI scans. As Willis (2006, pp. 65–66) comments:

When the metabolic activation in the amygdala is mild to moderate and not excessive, new sensory input (learning information) passes more quickly through the limbic system into the brain centres of higher cognition, executive function and memory storage. As the sensory data pass through the 'preheated' but not overloaded amygdala and hippocampus, they are encoded with emotional meaning. Information with positive emotional connection is retained more successfully. During positive emotional states, when neuroimaging shows metabolic mild stimulation in the amygdala, students tested showed better focus, memory enhancement, improved reading and writing, increased decision-making abilities, and the more flexible thinking needed to stimulate creative ideas for problem-solving. They even were observed to have social behaviours of greater helpfulness, sociability, and patience.

From the Willis (2006) findings it appears emotions and thinking are physically entwined. In other words the way we feel in our body is governed by our emotions and the way we feel impacts on our learning. Understanding the impact of emotions in learning is important for teachers as Zull (2004, p. 70) asserts 'the emotional connection has implications for student motivation...learning should feel good, and the student should become aware of those feelings...teachers have long known from experience about the importance of practice and emotional engagement in learning'. People are more likely to learn and to remember if intrinsically motivated and emotionally engaged. Conversely, negative emotions such as stress and fear of failure have been shown to impede learning and memory (Masters, 2011; Blakemore, 2005; Willingham & Lloyd, 2007; MacCann, Fogarty, Zeidner & Roberts, 2010). This finding is significant in terms of teaching and learning in the classroom as it makes a powerful contribution to understanding student motivation.

The close link between cognitive and affective factors is thus becoming well accepted: 'Processes we had considered pure "thinking" are now seen as phenomena in which the cognitive and emotional aspects work synergistically' (Elias & Arnold, 1997, p. 4). Sylwester (1998, p.27) argues 'we know emotion is important in education — it drives attention, which in turn drives learning and memory'. In addition, adverse or threatening environments can elevate levels of the stress hormone cortisol in the body. The negative impact of raised cortisol levels on cortical functioning affects attention and students' working memory. Thinking about potential threats will occupy working memory when the student should be attending to the lesson content and learning experiences (Geake, 2009).

Geake (2009) remarks that the strong emotional dimension to learning has educational implications for pedagogy. The hippocampus, responsible for long-term memory, has strong connections to the amygdala and other parts of the limbic area involved in the generation of emotions, which 'explains why memories have an emotional dimension: that students learn what they care about' (Geake 2009, p. 115). We now know that learning is mediated by emotion-related processing. Other studies support these findings. For example, Graziano, Reavis, Keane and Calkins (2007), in a study of the role of emotion regulation in early academic success, found that children who had difficulty managing their emotions have trouble learning in the classroom. They felt it is likely that learning new information arouses children's emotions, ranging from anxiety to frustration when faced with new tasks. Similarly, Brandt (2003) suggests that teachers should take brain functioning into account in their teaching and students should be helped to understand the relationship between emotions and learning. Teachers need to attend to students' social and emotional needs as well as their cognitive knowledge and skills and understand the ways these areas are intertwined (Caine & Caine, 1998; Elias, Arnold & Hussey, 2003). Jensen, a key contributor to 'brain-based' learning, concludes that 'there is no separation of mind and emotion: emotions, thinking and learning are all linked' (cited in Corrie, 2009, p. 8).

Immordino-Yang and Faeth in Sousa (2010, p. 82) explain the value of using emotions to facilitate learning:

A rich body of recent neuroscience research has demonstrated the interrelatedness of emotions and cognition and the importance of emotion in rational thought (Greene, Sommerville, Nystrom, Darley, & Cohen 2001; Haidt, 2001; Immordino-Yang, 2008). Yet much contemporary educational practice considers emotion as ancillary or even as interfering with learning. Students' accumulation of subtle emotional signals guides meaningful learning helping them build a set of academic intuitions about how, when and why to use their new knowledge. Rather than try to remove emotions from the learning context teachers can use this neuroscientific perspective to orchestrate an emotional climate in the classroom that is conducive to students feeling the subtle emotional signals. As students learn to notice and refine these signals, learning will become more relevant and meaningful to them and ultimately more generalisable and useful in their everyday lives.

Immordino-Yang and Faeth (2010, p. 81) also note the importance of teachers understanding their impact on students' emotions. For example, if a teacher enters the classroom apparently motivated and enthusiastic about his or her topic, then there is greater likelihood that the students will be 'infected' by the positive facial expressions accompanying this emotion and react positively to the class. The opposite is true as well with students being less motivated and interested in the subject if the teacher conveys a lack of positive interest and genuine commitment to the academic discipline and topic being presented.

Geake (2009) clarifies the new knowledge about mirror neurons by suggesting they help us to see the world from the point of view of others by firing when we observe someone doing a task even if we are not carrying out the task ourselves. Mirror neurons support a suite of social behaviours including imitation, empathy and 'mind reading'. Intentionality is critical for

the activation of those brain regions involved in imagining the thinking of others. It is certainly relevant to the daily experience of teachers who can maintain good classroom order by anticipating the behaviour of students through imagining their intentions. Understanding the professional engagement of mirror neurons and managing the impact of one's emotions on students lend support to Harvey (2005) who states much challenge lies ahead, not only in researching the various emotional complexities in teaching and learning, but designing and managing programs to improve the emotional climate in classrooms as well. Schutz et al. (2007) and Hille (2011) lament the fact that different traditions of research on emotions (e.g., psychology, education, neuroscience and sociology) have been working in relative isolation. Because researchers define their constructs of emotions in different ways, communication between researchers and an integration of empirical findings has been challenging. Insightfully, they say progress in this field requires interdisciplinary perspectives and call for more interdisciplinary collaboration between researchers.

Almost two decades ago Bruer (1997) recommended that we as educators should develop a recursive relationship among research programs in education, cognitive psychology and neuroscience to allow us to extend and apply our understanding of mind and brain and learning. Cognitive neuroscience has established its importance in understanding behaviour at an individual level but is only just beginning to contemplate the types of complex social domains studied by educational researchers (Howard-Jones, 2011a). Stern (2005) says neuroscience alone cannot provide the specific knowledge required to design powerful learning environments in particular school content areas. But by providing insights into the abilities and constraints of the learning brain, neuroscience can help to explain why some learning environments work while others fail. Goswami (2004) emphasises the potential for neuroscience to make contributions to educational research is great. Nevertheless, bridges need to be built between neuroscience and research in education.

In his interdisciplinary book *The Brain at School: Educational Neuroscience in the Classroom*, Geake (2009) asks what can be done to address the emotional priority of fear when learning. While acknowledging the power of the amygdala and its 'unconscious hegemony' (p. 117) he points out that there is some evidence of a relationship between emotional intelligence and academic achievement. He notes an increasingly popular approach to learning in school incorporates emotional intelligence, whereby students learn how to effectively perceive, express, understand and manage emotions.

Neuroscience has great potential to inform teaching and learning and while teachers are not technically trained to critique the findings in neuroscience or resolve the debate that exists in the discipline, there is an important link between emotions and learning which needs to be assessed in the classroom by practising educators to evaluate the extent of its usefulness for improving learning.

### **2.3 Emotional Intelligence, the Brain and Learning**

The Cartesian view of a separation between the mind and body has influenced our way of thinking about the link between emotions and cognition. Immordino-Yang and Damasio (2007) believe we have elevated the superiority of rational thought and yet, we have eschewed the importance of emotion in 'rational' learning. Damasio et al. (2000) propose emotions can now be linked to improving learning as new research in cognitive neuroscience and education suggests emotions involve both body and brain in learning (Immordino-Yang, 2011). Emotional Intelligence and neuroplasticity have emerged as important constructs for teachers to consider when facilitating learning.

Many teachers have traditionally accepted a student's IQ (Intelligence Quotient) as a measure of academic potential and IQ-based education as the key to academic success Sternberg (2008). Allen and Cohen (2006) indicate that the Stanford-Binet Test of

Intelligence has dominated educational testing and practice in the USA and has fostered the belief that linguistic and mathematical abilities represent the essential components of intelligence. In New South Wales many school counsellors use the WISC (Wechsler Intelligence Scale for Children) in an endeavour to predict a student's potential academic achievement (T.Winfer, NSW Department of Education and Communities [DEC] School Counsellor, personal communication, 9 February 2012).

Della Chiesa (2013) suggests deterministic views poison our understanding of the learning brain and IQ, an artificial creation supposed to measure 'intelligence' but which limits our view of a learner's 'educability'. It allows only a snapshot diagnosis of specific cognitive functions — at best, of one (maybe two) of Gardner's eight (or more) 'multiple intelligences' (Gardner, 2006). In the last three decades teacher belief in using forms of intelligence other than those traditionally privileged by the school (i.e., Logical-mathematical and Verbal-linguistic intelligences) has seen many teachers incorporating 'Multiple Intelligences' (MI) into their lesson preparation in attempts to increase student engagement and improve learning outcomes. Learners' 'other' intelligences include Visual-spatial, Bodily- kinaesthetic, Musical-rhythmic, Interpersonal and Intrapersonal (Howard-Jones, 2009, p. 20) and the more recently added Naturalist (Cornish and Garner, 2009, pp. 186–7). Emotional Intelligence is reflected most strongly in Gardner's definitions of Intrapersonal and Interpersonal Intelligences. Gardner (1993, cited in Ellison, 2001, p. 9) wrote:

I propose two forms of personal intelligence—not well understood, elusive to study, but immensely important. Interpersonal intelligence is the ability to understand other people: what motivates them, how they work, how to work collaboratively with them. Intrapersonal intelligence, a seventh kind of intelligence, is a correlative ability, turned inward. It is a capacity to form an accurate, veridical model of oneself and to be able to use that model to operate effectively in life.

Gardner has been criticised in relation to the scientific basis for MI theory and most studies that have assessed its usefulness in the classroom have not tested the validity of the 'intelligences' but rather their usefulness in pedagogy. In education there has been increased celebration of 'other' intelligences, at least as potential tools for increasing student engagement in learning by fostering students' individual talents (Howard-Jones, 2009).

Waterhouse (2006) suggests that MI and EI theory are not supported by sound or consistent validating empirical evidence and therefore their efficacy in classroom practice and effect on learning may be because of novelty. Roberts and Matthews (2002) argue we should not dismiss the potential value and importance of school-based EI interventions and Gardner and Moran (2006) point out that Waterhouse (2006) overlooks a large body of evaluation research suggesting that not only can EI competencies be taught but doing so already has contributed to important social, emotional, and academic gains for children. Zeidner, Cherniss, Extein, Goleman and Weissberg (2006) propose that the time has already come when solid data suggest the importance of EI theory, and since we know very little about the effects of school-based teaching and promotion of EI, developing programs for improving emotional skills in the classroom and workplace is increasingly seen as legitimate.

Humphrey, Curran, Morris, Farrell and Wood (2007) call for high-quality controlled longitudinal studies to evaluate the long-term impact of introducing EI into schools and more focus on secondary schools.

Evidence from research considering Emotional Intelligence and learning has increased in the past decade including discussion at an OECD conference in 2004 (OECD CERI, 2004) and the establishment of a plethora of related research Institutes, Labs and Centres of Research. For example: the ZNL ([www.znl.ulm.de](http://www.znl.ulm.de)) aims to transfer research from cognitive neuroscience relevant to education, from theory into practice. The interdisciplinary team of psychologists, educators and other scientists conducts evaluations and supports educational

institutions to explore, in the teaching and learning context, whether a particular intervention works. The Max Planck Institute for Human Development ([www.mpg.de](http://www.mpg.de)) is dedicated to the study of human development and education and the importance of human emotions, while The Institute for the Future of the Mind at Oxford ([www.futuremind.ox.ac.uk](http://www.futuremind.ox.ac.uk)) acts as a hub, drawing together evidence from all aspects of the brain-sciences and ensuring that it is accessible to decision-makers throughout learning and education. The Learning Lab, Denmark ([www.dpu.dk](http://www.dpu.dk)) is an independent centre for research on learning, affiliated to the Danish University of Education with the aim of solving urgent societal problems related to learning, through experimental and practice-oriented research and development activities. These centres focus on understanding the mind and how to improve learning.

The notion of using emotions to promote academic success can be seen in Mayer and Salovey's (1997) view of Emotional Intelligence which included the ability to reflectively regulate emotions so as to promote emotional and intellectual growth. Matthews et al. (2007) support Goleman's claim that Emotional Intelligence might be more fundamental than IQ, could predict success in later life and could perhaps be learned or at least improved. They define Emotional Intelligence as representing a 'set of core competencies for identifying, processing and managing emotion ... with EI commonly claimed to predict clinical, educational and occupational criteria above and beyond that predicted by general intelligence' (p. 3). The Emotional Intelligence competencies or competencies as defined by Goleman (1998) are *Self-Awareness*, *Self-Regulation*, *Motivation*, *Empathy* and *Social Skills* (note from here on the competencies will be *italicized* as a signpost they are EI competencies). He defines emotional competence as a learned capability, based on Emotional Intelligence, that results in outstanding performance at work.

The Personal Competencies of *Self-Awareness*, *Self-Regulation* and *Motivation* determine how we manage ourselves. Goleman (1998, p. 26) describes the competencies as follows:

- *Self-Awareness* is knowledge of one's internal states, preferences, resources, and intuitions. It includes emotional awareness: recognising one's emotions and their

accurate self-assessment: knowing one's strengths and limits; self-confidence: a strong sense of one's self-worth and capabilities.

- *Self-Regulation* is managing one's internal states, impulses, and resources. It includes self-control: keeping disruptive emotions and impulses in check; trustworthiness: maintaining standards of honesty and integrity; conscientiousness: taking responsibility for personal performance; adaptability: flexibility in handling change; innovation: being comfortable with novel ideas, approaches, and new information.
- *Motivation* is having emotional tendencies that guide or facilitate reaching goals. It includes achievement drive: striving to improve or meet a standard of excellence; commitment: aligning with the goals of the group or organisation; initiative: the readiness to act on opportunities; optimism: persistence in pursuing goals despite obstacles and setbacks.

The Social Competencies (Goleman, 1998, p. 27) of *Empathy* and *Social Skills* determine how we handle relationships:

- *Empathy* is an awareness of others' feelings, needs, and concerns. It includes understanding others: sensing others' feelings and perspectives, and taking an active interest in their concerns; developing others: sensing others' development needs and bolstering their abilities; service orientation: anticipating, recognising and meeting customers' needs; leveraging diversity: cultivating opportunities through different kinds of people; political awareness: reading a group's emotional currents and power relationships.
- *Social skills* feature adeptness at inducing desirable responses in others. They include influence: wielding effective tactics for persuasion; communication: listening

openly and sending convincing messages; conflict management: negotiating and resolving disagreements; leadership: inspiring and guiding individuals and groups; change catalyst: initiating or managing change; building bonds: nurturing instrumental relationships; collaboration and cooperation: working with others towards shared goals; team capabilities: creating group synergy in pursuing collective goals.

Scott and Wilson (2002) and Scott, Coates and Anderson (2008) have adapted these competencies for successful graduate students and for educational leadership in universities. The competencies can be further adapted for use in the classroom. In my experience the Emotional Intelligence competencies most useful in the classroom include: *self-awareness*: understanding personal moods and emotions and recognising how personal efforts affect others; *self-regulation* or *control*: controlling disruptive impulses and moods; *motivation*: passion for learning, energy and persistence to learn; *empathy*: understanding the emotions of others and the *social or relationship skills* of interpersonal emotional intelligence.

Further consideration of a student's Emotional Intelligence as an important factor in successful learning appears warranted. Emotionally charged events affect current functioning. Matthews et al. (2007) and Downey and Stough (2006) suggest the connection between Emotional Intelligence and educational success should be clearly understood and applied in the education arena as students are (as discussed previously) more likely to learn in a situation of emotional connection. Elias and Arnold (2006) also draw our attention to the amygdala as the body's emotional alarm system, constantly seeking emotionally related data and having a crucial function to assign emotional meaning to memories.

Dr Katrin Hille, a Director of the Transfer Centre in Ulm, explains that 'emotions tag what is important' at '100 megabytes per second!' (K. Hille, personal communication, 15 December 2011). This finding is significant for teachers, considering the large amount of memory work

required in our schools.

The position papers at the OECD Centre for Educational Research and Innovation, Learning Sciences and Brain Research Conference (OECD CERI, 2004) make it clear that emotions are important in shaping successful learning. Indeed, a paper describing the ExPRESS project in the UK reported that students can work with their own physiology to control their brain function and improve their own Emotional Intelligence, by learning strategies to become aware of, experience, manage and direct their own emotional energy (Watkins,2004). At a different conference, held by the Association for Supervision and Curriculum Development (ASCD) in 1997, Poole (1997) asked: 'Have you had an amygdala attack lately?' and then quoted Goleman by saying 'our amygdalas rule our emotions, our feelings, our relationships, our learning'. She suggests using EI strategies so one knows what to do when the amygdala 'attacks'. MacCann et al. (2010) suggest better educational outcomes might be achieved by targeting skills relating to emotion management. These presentations and publications denote an awareness of the role emotions play in learning and highlight the need for targeted research to further explore and validate such claims.

Gil-Olarte Márquez, Palomera Martín and Brackett (2006) report students with high Emotional Intelligence tend to be more pro-social and perform better in school. Bar-On (2012) has found that EI has significant impacts on both physical health and subjective well-being, and socially and emotionally intelligent behaviours are both teachable and learnable. These findings suggest that integrating lessons on socio-emotional learning in schools might improve students' performance, decrease poor behaviour and increase pro-social behaviour.

Hawn and Holden (2011, p. 22) describe the 'butterfly brain' of today's students, where the flickering images of digital media require multitasking and the young brain is made restless by technology. In today's era of email, facebook, snapchat and 'bedroom communities, the

scales are increasingly tipped against the automatic and accurate perception of others' emotional state, without which empathy is impossible' (Hoerr, 2008, p.11). We recognise and share the emotions of others as we watch the movements and behaviours that signal the inner state of another person. Correctly identifying and truthfully showing behaviours on screen and often without the scrutiny of others may not be as reliable as when exhibited in person.

Adolescents can suffer from poor self-image when comparing themselves to another's well 'liked' facebook profile. Cyberbullying can be executed without the perpetrator being exposed to a victim's grief-stricken reaction. These experiences can add to students' restlessness and stress. Young people are also not so easily satisfied by an environment that by comparison seems flat or boring: 'Students face "e-diction" and are "tired but wired" which is affecting the consolidation of memories. Stress shrinks the executive function areas of the brain and stimulates habit forming parts that keep us repeating actions in a negative pattern' (pp. 24–26). Hawn and Holden (2011) also feel the recent developments in neuroscience and the discovery of the brain's neuroplasticity indicate that 'you can teach an old dog new tricks'. Quoting Richard Davidson, Professor of Psychology-Psychiatry at the University of Michigan, they note that neural pathways involved in regulating emotions are 'malleable by the environment and are potential targets of training in the same way that neural pathways change and develop as a result of injury' (pp. 33–34).

Research into brain development and functioning has discovered information that is particularly relevant to teachers in secondary schools. While teenagers' bodies are reaching maturity their brains are still undergoing developmental changes that can cause erratic behaviour. Steinberg (2011, p. 45) describes these changes: 'at the same time that the adolescent brain is maturing in ways that enable teenagers to become more capable of reasoned thinking, it's also changing in ways that make them do risky things.' Willis (2006, p. 67) describes the prefrontal cortex as a crucial area for decision-making: 'This brain region is the centre for emotional stability, moral reasoning, judgment, and executive functions such

as concentration, planning, delayed gratification and prioritising', and it is the last part of the brain to mature.

Even as adults we know that resisting temptation and changing our behaviour may be difficult because of the way our brains have evolved. Evolution of our neural networks to inhibit temptation is relatively new and 'there are large and ancient brain networks dedicated to processing rewarding stimuli, while the brain systems (in the frontal lobes) that enable the inhibition of these networks are comparatively recent' (Blakemore, 2005, pp. 179–181). If adults find inhibiting gratification difficult, the delaying of gratification by adolescents certainly requires supportive 'emotional learning' to 'retrain' the brain. We now know it is possible to 'change the way we think', due to the brain's plasticity.

Brain plasticity means the ability of the brain to adapt continually to changing circumstances such as injury (Blakemore, 2005). It appears that brain circuits for the regulation of emotion and attention are targets for training at any age. Research into the neuroplasticity of the brain suggests emotional learning can continue throughout life. Eric Kandel from Columbia University Department of Psychology and Nobel Prize-winner in 2000 showed that as we learn, our individual neurons alter their structure and strengthen their synaptic connections, and our emotional operating systems exhibit neuronal 'plasticity' (cited in Doidge, 2007, pp. 219–220). If people can recover from grim emotional imprinting it implies emotional circuitry can be re-wired through re-learning (Panksepp, 1998) and if mediation of fearfulness and emotional re-learning are possible, this plasticity further suggests that we can educate people to change their neural pathways and emotional learning can continue throughout life.

Current research suggests the nexus between Emotional Intelligence and learning might be more important than is currently acknowledged in education and in our potential for success in life. In addition, if the neuroplasticity of the brain allows emotional circuitry to be changed and

EI to be enhanced, then teachers could capitalise on the potential for students to use EI strategies to improve their learning outcomes. As stated above, there is a real need for targeted research to explore and validate the role the emotions play in learning.

## **2.4 Emotional Intelligence in Education**

Much work in the 1990s involved development of the concept of Emotional Intelligence and its measurement. Early 21<sup>st</sup>-century research has verified the contribution of emotional abilities to people's lives (Graczyk et al., 2000; Fernández-Berrocal & Extremera, 2006). The benefits of EI skills include: preventing moods from having unwanted influences on judgment and behaviour; building friendships; dealing well with workplace conflict; and improving physical and mental health (Ciarrochi, Forgas & Mayer, 2006). Applied research determining the real value of EI in different fields of our lives is now manifesting itself in education. Large-scale meta-analyses are showing a link between Social and Emotional Learning (SEL) and school performance.

In a comprehensive meta-analysis, Martins, Ramalho and Morin (2010) showed EI was strongly and explicably linked to mental and physical health, while Mavroveli and Sanchez-Ruiz (2011) demonstrated that EI relates to academic behaviour and school achievement (cited in Furnham, 2012). The recognition that emotional learning and social-emotional skills are linked to success at school has led to the development of school curricula with the purpose of building emotional skills and school–family partnerships (Zins, Weissberg, Wang & Walberg, 2004 cited in Cornish & Garner, 2009, p. 67).

Dryden and Vos (2008, p. 110) quote Goleman as stating, 'Emotional Intelligence skills can be taught to children, giving them a better chance to use whatever intellectual potential the genetic lottery may have given them.' Schools that integrate SEL into existing curricula have a higher likelihood of improving student achievement (Elias & Arnold, 1997). Research has

shown students need the opportunity to foster their emotional and social skills to promote effective learning (DiPerna & Elliott, 1999; Feshback & Feshback, 1987; Haynes, Ben Avie & Ensign, 2003; Pasi, 2001, quoted in Zins et al., 2004). Zins et al.'s (2004) view is that SEL programming enhances students' connection to school, classroom behaviour, and academic achievement.

The OECD (2007) states that the ability to regulate emotions is one of the key skills in being an effective learner and social competence is a predictor of academic outcomes. In the current educational policy environment, schools are held accountable for raising student test scores. Payton et al. (2008) describe the positive impact of SEL programs on academic outcomes, including school grades and standardised achievement test scores. Although some educators argue against implementing this type of holistic programming because it takes valuable time away from core academic material, the research of Payton et al. suggests that SEL programming does not detract from academic performance but actually increases a student's performance on standardised tests and grades.

The Australian Curriculum and Assessment Reporting Authority (ACARA) has included the development of personal and social capabilities as a foundation for learning (<http://www.australiancurriculum.edu.au>). The NSW DEC (2011, Executive summary point vii) maintains that 'social and emotional learning programs are effective in enhancing students' academic achievement and thus offer students a practical educational benefit'. Their claim is based on a literature review of models of effective practice in educational settings for meeting the psychological and emotional well-being needs of children and young people. Other research supports their claim. Durlak and Weissberg (2011), for example, have completed a large-scale meta-analysis of SEL programs in over 200 schools. They list findings from researchers who support the link between SEL competence and better school performance and also from those researchers who question the strength of this link. Their 2011 meta-analysis research found SEL programs 'yielded significant positive effects on

targeted social-emotional competencies and attitudes about self, others, and school. The programs also enhanced students' behavioural adjustment in the form of increased pro-social behaviours, reduced conduct and internalising problems, and improved academic performance on achievement tests and grades' (p. 417). This improvement manifested in an 11-percentile-point gain in academic achievement on test scores and school grades (p. 405).

A study reported in the same meta-analysis, Durlak and Weissberg (2011), also found classroom teachers and other school staff were able to effectively conduct SEL programs. The authors suggest that these interventions can be incorporated into routine educational practices and do not necessarily need to be delivered by a trained psychologist. They indicated that 'SEL programs are successful at all educational levels (elementary, middle, and high school) and in urban, suburban and rural schools, although they have been studied least often in high schools and in rural areas' (p. 417). This success augurs well for classroom teachers wishing to include emotional learning in educational practice and for teachers in high schools and in rural areas, to contribute to research in this area.

Walberg, Zins and Weissberg support the call for additional research on all SEL topics including research on the link between Emotional Intelligence and academic achievement (Zins et al., 2004, p. 210). In spite of the difficulty in conducting them, Walberg, Zins and Weissberg call for large-scale randomised field trials for greater certainty about the magnitude and universality of the effects of SEL. They also highlight a need for detailed descriptions of the features of SEL programs, how they are implemented, how they affect school outcomes, what barriers there are to successful program implementation, why SEL works in some circumstances and not others, and how important a factor in success is teacher 'buy-in'. Such research is needed in order to enable researchers, policymakers, and educators to better understand the causal mechanisms that link SEL and school outcomes.

Walberg, Zins and Weissberg (in Zins et al., 2004) assert further research is essential to

document the positive effects of SEL both on student outcomes in school, including academic achievement, and on teachers. They see SEL as having the potential to reduce teacher attrition by reducing job-related stress, to increase feelings of effectiveness and job satisfaction, to reduce student–teacher conflicts and discipline problems, and to improve classroom management skills. Such research would be of significant interest to teacher educators, school administrators, educational policy makers and those responsible for teacher professional learning. Establishing the importance of SEL would play a powerful role in further establishing Emotional Intelligence as an essential component of teacher preparation programs and teacher professional learning programs.

## **2.5 Emotional Intelligence Scaffolding and Learning**

Just as cognitive scaffolds have been found valuable in assisting student learning, so too do EI scaffolds have the potential to assist learning.

### **2.5.1 The value of using EI scaffolding in the classroom**

Neuroscientific and educational evidence support the link between managing emotions and successful learning. Emmerling and Goleman (2003) found support for the ability to teach EI. They highlighted research findings from a longitudinal evaluation of the Weatherhead MBA program in which emotional intelligence was found to be improved by 50% seven years after program completion. They also highlighted neurological research supporting the contention that the brain centres for emotion, including the amygdala and pre-frontal cortex, may be plastic and capable of change (cited in Stys & Brown, 2004).

Op't Eynde, DeCorte and Verschaffel (2007) identify three key dimensions of (emotional) coaching in educational environments: (1) a lack of derogation; (2) presence of warm interpersonal relations; and (3) a focus on cognitive as well as emotional scaffolding. The first two dimensions, lack of derogation and warm interpersonal relations, align with the Emotional Intelligence competencies of *empathy* and *social/relationship skills*. To promote

these competencies to drive learning, teachers need to utilise the third dimension of 'scaffolding'.

A scaffold is a structured tool to guide learning. Cognitive scaffolding is provided by teachers in the form of organisers or processes to assist the student to acquire new knowledge. Scaffolding can help close the gap between the actual developmental level as determined by independent problem solving and the potential developmental level as determined through problem solving under adult guidance or in collaboration with more capable peers. Vygotsky (1978) refers to this gap —the area just outside an individual's current level of competence —as the Zone of Proximal Development or ZPD. This area is where someone cannot solve the problem unassisted but can be helped by an appropriate intervention (Cornish & Garner, 2009, p. 26). Scaffolding refers to the dynamic interactional process whereby the teacher or more capable peers intervene as a supportive tool for learners for constructing knowledge (Sullivan et al., 2012). Emotional coaching in educational environments involves the development of supportive tools or scaffolds for emotional learning to supplement the scaffolds for cognitive work.

Meyer and Turner (2007) explain the value of teachers' use of emotional scaffolding to shape classroom interactions to drive learning. Expanding on the traditional view of cognitive scaffolding, they define emotional scaffolding as a way a teacher can use emotions to support student learning and development. They argue emotional scaffolding may sustain and enhance students' understanding, *motivation*, collaboration, participation, and emotional wellbeing. The authors differentiate emotional scaffolding from other forms of positive teacher–student interactions in that the support has a specific goal of increasing student achievement and autonomy in a particular developmental competency, and often in several areas simultaneously. They observe that while the idea of scaffolding emotions is not new, the focus on using emotional learning to support other classroom goals is new (p. 224). Sousa (2011)

describes the emotional dimension of learning as the most overlooked aspect. Emotional Intelligence scaffolding strategies need to assist students to manage their emotions and to transfer their new emotional learning to situations beyond the classroom.

Leckowicz (1999), Elias and Arnold (2006), and Hinton, Miyamoto and della Chiesa (2008) recognise the importance of Social and Emotional Learning (SEL) for successful academic learning, and that this claim is supported by the recent developments in neuropsychology, as discussed above. Many elements of learning are relational (or based on relationships) and social and emotional skills are essential for the successful development of thinking and learning activities that are traditionally considered cognitive (Brendtro, Brokenleg & Van Bockern, 1990; Perry, 1996, cited in Elias and Arnold, 2006). Cognitive and emotional learning are intertwined and 'If schools are involved in intellectual development they are inherently involved in emotional development' (Hinton, Miyamoto & della Chiesa (2008). In this sense, SEL can be viewed as a type of scaffold for cognitive learning.

As previously discussed, Durlack and Weisberg's (2011) meta-analysis of SEL programs showed they significantly improve student social and emotional competencies as well as academic performance. More recent evidence by Di Fabio and Henry (2011, cited in Di Fabio, 2012) supports this finding that specific training in EI strategies can have significant success in career-path planning for students.

Ciarrochi and Mayer's (2007) *Applying emotional intelligence: A practitioner's guide* is designed to serve as a guide to EI intervention. In Chapter 1, Brackett and Katalak refer to the Collaborative for Academic, Social, and Emotional Learning (CASEL) that recommends SEL programs should be field-tested, evidence-based and founded on sound psychological or educational theory. They discuss two programs focusing on EI scaffolding in the classroom that fulfil CASEL's requirements. These programs are anchored in EI theory which

proposes that four fundamental emotion-related abilities comprise Emotional Intelligence. These abilities include the following: (1) perceptions/expression of emotion; (2) use of emotion to facilitate thinking; (3) understanding of emotion; and (4) management of emotions in oneself and others. These four skills promote better quality relationships, enhance emotional health and improve academic and work performance. Goleman's (1998, pp. 26–27) personal competencies of *self-awareness*, *self-regulation* and *motivation* and social competencies of *empathy* and *social skills* are clearly reflected in this intervention.

The Emotionally Intelligent Teacher (EIT) program (Ciarrochi & Mayer, 2007, pp. 5–14) is designed to improve a teacher's Emotional Intelligence skills. It results in classroom teachers reporting an enhanced ability to consider their own emotional biases and the emotional state of their students when planning lessons or reacting to student behaviour. The student program Emotional Literacy in the Middle School (ELMS) (Ciarrochi & Mayer, 2007, pp. 14–23) has been implemented in several schools across the United States and in Kent, England in fifth through to eighth-grade classrooms. These programs have had a positive impact on school-related performance, enhancing academic performance and social competence. Parker, Saklofske, Wood and Collin (2009, pp. 249–252) assert that the program Promoting Alternative Thinking Strategies (PATHS), though not specifically designed to be an EI intervention, was found to increase the emotional and social skills of pre-schoolers and students in special education. They collectively call for more exploration in the assessment of EI programs for school-aged students. However, Parker, Saklofske, Wood and Collin's (2009) research focus is measuring the changes in a student's EI rather than the impact of the program strategies on learning outcomes.

A program researched by Brackett, Rivers, Reyes and Salovey (2012) tested the impact of a 30-week SEL curriculum, The RULER Feeling Words Curriculum ('RULER'), on the academic performance and social and emotional competence of fifth and eighth-grade students

(*N* = 273) in fifteen classrooms in three schools. Academic performance was assessed by

report card grades. Social and emotional competence was assessed with teacher reports of student behaviour. Students in classrooms integrating RULER had higher year-end grades and higher teacher ratings of social and emotional competence (e.g., leadership, social skills, and study skills) compared with students in the comparison group (p. 218).

In the UK, Hallam (2009) evaluated the pilot Social and Emotional Aspects of Learning program (SEAL) designed to develop children's social, emotional and behavioural skills in the primary school for the then Department for Education and Skills. While she acknowledges difficulty in the research scope of her evaluation (as SEAL was part of a broader initiative to improve student behaviour and attendance) she did find positive outcomes of the implementation of the program, including the introduction of the language of emotion into schools, increased awareness of difficult emotions and the provision of ways and materials to consider them, and the facilitation of the development of staff social and emotional skills.

Geake (2009, p. 113) describes the UK response to enhancing the role of emotional resilience in education through the introduction into the school curriculum of lessons in well-being and happiness under the rubric of emotional intelligence. This EI curriculum involves the reflective regulation of emotions, the analysis and application of emotional knowledge, the emotional facilitation of thinking, as well as the perception, appraisal and expression of emotion. Geake proposes that educational practices most conducive to the promotion of optimum social, cognitive, affective and moral development of children and young people in ways that prepare them for active participation in post-industrial societies are literacy and numeracy, high-level reasoning skills as well as self-reliance and emotional resilience in the face of a socially fragmented, unstable and unpredictable world. Given the emotional turmoil experienced during adolescence it is as well that 'affective and social neuroscience findings suggest that emotion and cognition, body and mind work together in students of all ages' (Immordino-Yang, 2011, p.102). Stafford, Moore, Foggett, Kemp and Hazell (2007) call for further evidence in order to understand the links between resilience, behaviour and academic success.

Fatum (2013) from [www.6seconds.org](http://www.6seconds.org) studied the role of EI strategies in test preparation at The Synapse School ([www.synapseschool.org](http://www.synapseschool.org)), a school specialising in gifted education and developed by the Six Seconds Emotional Intelligence Organization. The premise was that students who use EI skills to reduce stress and manage emotions will increase their academic achievement on standardised tests. Fatum designed and delivered a program building on the student's knowledge of their emotional intelligence competencies in addition to normal academic preparation by classroom teachers.

Students reported as a result of their preparation with EI that they felt calmer and better-prepared while taking the Educational Records Bureau academic achievement test (ERB). They were also reported to be able to better navigate their emotions and focus more clearly on questions. The students stated that they acted on their empathy for other students and, during preparation, helped their classmates remain calm, experience optimism, and feel confident in their abilities. Most importantly to note, the same students tied or beat the Independent School Norms in almost all of the subject categories.

Fatum (2013, p.10) explains the results in the following way: 'Emotions affect how and what children learn (Fatum, 2008). Unchecked emotions raise an individual's stress level, and stressed brains find it very difficult to learn or demonstrate learning (Medina, 2008).' Goleman in *The Brain and Emotional Intelligence: New insights* (2011) described the impact of stress arousal on performance. Boredom and disengagement trigger too little of the stress hormones secreted by the HPA axis, the circuitry that secretes stress hormones when the amygdala gets triggered and performance lags. As we get more motivated and engaged we move into our optimal performance 'Flow' (Csikszentmihalyi, 1990) zone and if the challenges become too great or emotions run too high, stress levels increase and can hamper performance or trigger challenging behaviours. This increase, as has been mentioned before, can harm the hippocampus, the crucial part of the brain for short-term memories. The hippocampus is rich in receptors for cortisol, a stress hormone, and flooding the hippocampus with cortisol can

disconnect existing neural networks. Goleman recommends the strategy of mindfulness to prevent an amygdala attack and also to strengthen concentration or attention.

Some teachers may have the ability to provide EI strategies to students in their classrooms without being cognisant of these strategies being grounded in Emotional Intelligence. In my experience, however, many teachers do not have the pedagogy needed for effective emotional scaffolding in the classroom. Effective pedagogy to promote the successful use of EI interventions includes explicitly teaching students to identify emotions, to understand why emotions are triggered and how they can change, to manage their emotions by altering their form and frequency and by expressing optimal emotional states in different contexts (Ciarrochi & Mayer, 2007).

### **2.5.2 Possible concerns about EI programs**

A problem with much of the research on Emotional Intelligence interventions is that the different parts of the intervention have not been evaluated separately, only the whole package (Ciarrochi & Mayer, 2007). Thus we still really do not know *how* Emotional Intelligence programs work. Related to this criticism is the fact that most interventions have been designed for purposes other than fostering Emotional Intelligence skills (Zeidner, Matthews & Roberts, 2009). Thus some interventions have specific aims such as improving conflict resolution skills or reducing drug use while others have the more general aim of enhancing problem-solving skills.

Gil-Olarte Márquez, Palomera Martín and Brackett (2006) state it is important to test the effectiveness of SEL programs on outcomes in schools and to see if these skills are learned better by adding a specific program to the curriculum or by integrating SEL into existing curriculum. Only well designed experiments and longitudinal studies at various levels (primary and secondary) will show whether EI strategies can be learned and whether teaching these skills will have lasting effects. Furnham (2012) and Brackett and Katalak (2007) also argue we

need to know more about what type of training is most successful and why.

Another concern is that students may not transfer the skills taught in an EI course to real life away from the classroom. Neuroscience demonstrates that memories are coded to specific events and linked to social and emotional situations (Immordino-Yang & Faeth, 2010). These situations become parts of larger units of memory that make up what we learn and retain what takes place in the classroom. If students experience real or imagined threats or high anxiety, they can lose their focus on the learning process, lose their focus on tasks and on problem-solving.

### **2.5.3 Recommendations regarding delivery of EI scaffolding**

New learning can involve a fear of failure, yet it can also trigger 'flow'. 'Flow' can be described as a 'pleasure state', where the learner feels safe, the task has a comfortable level of challenge, the learner loses the sense of time passed and has a sense of satisfaction (Csikszentmihalyi, 1998, p. 4). Panju (2008) suggests how learners 'feel' about a learning situation determines the amount of attention they devote to it. Meditation and mindfulness can assist with achieving 'flow'. The brain regions that are impacted by mindfulness training are implicated in executive functioning and the regulation of emotions and behaviour and neuro-imaging results have shown increased grey matter density in the hippocampus and in structures associated with self-awareness, compassion and introspection (Meiklejohn et al., 2012). Professor of Psychology and Psychiatry Richard Davidson from the University of Michigan has shown, using fMRI scanning, that meditation, even in the short term, induces significant changes in patterns of functional activity in the brain (Davidson, 2012, p. 203–205). Davidson argues that in time, mental exercise will be as accepted as something that is as important to general well-being as physical exercise (Hawn & Holden, 2011, pp. 33–34). Hawn and Holden state students need to experience 'flow' in their learning to enhance success. An effective Emotional Intelligence scaffold would introduce the concepts of meditation, mindfulness and flow to students. To capitalise on the impact of mirror neurons,

Geake (2009) would suggest that role-playing to help us see the world from the point of view of others should be included in EI scaffolding as we learn by observing someone doing a task even if we are not carrying out the task ourselves.

Elias and Arnold (2006, p. 10) assert that SEL must be linked to language/literacy, instruction in maths and science, history and current culture, health and physical education and the performing arts. In all of these areas the essential skills for academic learning and SEL seek to achieve a deeper understanding of content and improved pedagogy resulting in greater student engagement in learning and fewer behaviour disruptions. They suggest that the quality of emotional bonds (positive, negative, or indifferent) that develop between students and their teachers has a crucial impact on learning and brain development (p. 31). They also suggest that education can have a critical influence on the strengthening of neocortical control and *self-awareness* and although teaching content or subject matter is important, the process or manner in which it is taught is probably even more significant, particularly the manner in which teachers promote emotional literacy in the classroom (p. 32).

Along the same lines, Ciarrochi, Forgas and Mayer (2001) write: 'To truly improve the social emotional lives of children and maximise learning, schools must become learning communities where social emotional learning is integrated with academic learning' (p. 147). Pasi's (2001) advice is to investigate existing quality programs and then tailor them to meet the school's particular situation and desired outcomes: 'Although initially some teachers may express concern that even a couple of lessons could cut into precious class time the consensus today is that the investment benefits academic learning' (p. 52).

The adoption of SEL approaches in schools can be affected by a number of factors such as the current regime of 'high stakes assessments' with its focus on academic rather than social-emotional learning (NSW Department of Education and Communities, 2011). For example,

students in NSW undergo NAPLAN (National Assessment Program — Literacy and Numeracy) in Years 3, 5, 7 and 9. However, as the research on the importance of SEL has indicated, an exclusive focus on academic skills might not be the best way to enhance academic performance (Stoiber, 2011).

Studies by Elias and Leverett (2011) and Gueldner and Merrell (2011) contribute to the growing body of evidence on the importance of consultants to facilitate teacher commitment to SEL by providing teachers with opportunities to reflect on taught concepts and the outcomes they hope to achieve. Elias and Leverett (2011) recommend (in urban environments at least) that any SEL-related curriculum must be explicitly linked to academic content areas and the teacher's instructional process. This professional relationship and linking to content areas could be replicated in NSW schools with a Learning and Support Teacher working with classroom teachers to infuse Emotional Intelligence scaffolding into their classroom practice.

## **2.6 Conclusion**

Understanding the importance of emotions in learning is well established largely as a result of developments in neuroscience. As a result, many authors have highlighted the need for more research into Emotional Intelligence and learning (e.g., Brandt, 2003) with empirical findings underpinning the work of educational leaders and teachers. Academic research that supports the use of Emotional Intelligence strategies to improve learning can strengthen the importance of EI itself.

Social and emotional learning programs appear to accrue additional benefits of academic success. Examples are emerging of how emotional learning can scaffold academic learning but there is a gap in the literature related to how students can actually use EI strategies to improve their learning, as well as a gap related to studies carried out in high schools in rural

areas (Durlack & Weissberg, 2011). The action research study carried out in a rural high school and described in the following chapters is a response to the need for further study of emotions and learning. Results of the study will add to the knowledge of how using Emotional Intelligence works in practice in a secondary classroom. As a high school educator, I cannot examine changes in my students' neural pathways to 'prove' a link between the pedagogy of providing students with strategies to improve their Emotional Intelligence and improvements in their learning and behaviour. However, I can investigate the actual practice of teaching students to recognise and manage their own emotions and the emotions of others, and any perceived effect this may have on their learning— in effect, the first step of taking the process out of the 'black box' (della Chiesa, 2013, p. 87). In Chapter 3, I describe the EI intervention I used to teach my students about emotions and Emotional Intelligence before describing, in Chapter 4, the methodology used in the study. Students' and teachers' perceptions of changes in students' EI competencies, Attitude, Effort and Performance and 'take-up' of EI strategies as a result of the intervention will then be presented in Chapters 5 and 6.

## **2.7 Research Question**

The concept of Emotional Intelligence while not being universally accepted is widely used in the education literature. I use the words Emotional Intelligence and in terms of my study, I define it as 'an understanding of the role the emotions can play in learning and how regulation of the emotions and the ability to engage in such regulation can "reset" neuronal pathways to improve the prospect of learning'.

The question of the impact of Emotional Intelligence Scaffolding to Improve Learning (EISIL) in this study is implicit in the primary research question:

*How do students and teachers perceive the influence of EISIL on student learning?*

Through the analysis and presentation of data in the previous two chapters, this study specifically examined the following sub-questions as they pertain to the research question:

- i) How do students perceive the influence of EISIL on their learning?
- ii) How do teachers perceive the influence of EISIL on their students' Attitude, Effort and Performance?

## Chapter 3: The Intervention — EISIL

### 3.1 Introduction

This chapter describes the EISIL scaffold in order to inform the reader of the nature of the intervention. In the lessons described below, EISIL reflects recent research about the positive effect of teaching students about their brain to enhance learning. Students are introduced to the structure of the brain and the recent developments in neuroscience that have helped us to understand 'how we learn'. Hinds (2010, p. 28) recounts the 2007 study of Dweck, a research psychologist from Stanford University, and Blackwell, from Columbia University, whose study focussed on looking at 100 11-year-olds in their first year of high school, all doing poorly in maths. The study was conducted in a secondary public school in New York City (Blackwell, Trzesniewski & Dweck, 2007). Half the group was assigned to workshops on study skills, and the others were taught about the expanding nature of intelligence and how neurons in the brain form new connections every time something new is learned. The findings from the study revealed the important message that 'learning changes the brain by forming new connections, and that students are in charge of this process' (p. 254). The group taught about the brain had significantly better maths results than the other group. This new 'growth mindset', Dweck says, changed their attitude to learning and generally facilitated their being more committed and putting in more personal effort to their academic work.

In another study, researchers at the Institute for the Future of the Mind wanted to see if giving pupils an anatomical insight into neuroscience could enhance their academic performance. Their research reveals that when learners know about the brain and about how learning and memory work, there is a beneficial effect on their attitudes to learning which in turn has the potential to raise attainment (Dommett, Devonshire & Churches, 2011, p.13). This finding is echoed in Blackwell et al. (2007, cited in Howard-Jones, 2011a), that when students know about the plasticity of their own brains, there can be a positive influence

on their self-concept and their academic achievement. I wanted students to know about IQ as a measure of academic potential, and the thinking around Emotional Intelligence as an important attribute in successful learners and success in life. The Institute for the Future of the Mind results show that learning about their brain makes students feel differently about 'intelligence' and that it is not a fixed entity.

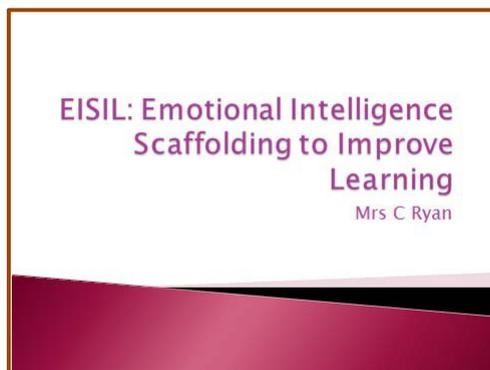
I wanted to research an intervention that could be used by teachers in their everyday classroom practice. Walberg, Zins and Weissberg in Zins et al. (2004) recommend SEL activity should be integrated into curricula and daily instruction to enhance the probability of success. The 'Response Ability Initiative' Social and Emotional Learning Factsheet of the Commonwealth of Australia (Hunter Institute of Mental Health) (2013) also states it may be useful to integrate key principles of SEL into everyday instructional techniques and classroom practices. The Factsheet encourages teachers to look for opportunities to encourage students to explore emotions, work collaboratively, develop respect for others and learn to manage their own behaviour.

Zins, Bloodworth, Weissberg and Walberg in Zins et al. (2004) describe a variety of SEL instructional approaches that can be used to promote school achievement. I chose to supplement the instructional process with 10 lessons to promote SEL skills that students could use in their regular academic curriculum. Once students possessed SEL skills they could endeavour to increase their academic engagement using the same skills across different subjects.

A PowerPoint presentation was developed to introduce students to the content of the intervention and this was supplemented and enhanced by discussion opportunities and activities. A 'storyboard' of the PowerPoint lessons follows with my 'lesson notes' in italics. While these notes may seem a little formal or sophisticated at times, teachers would adapt

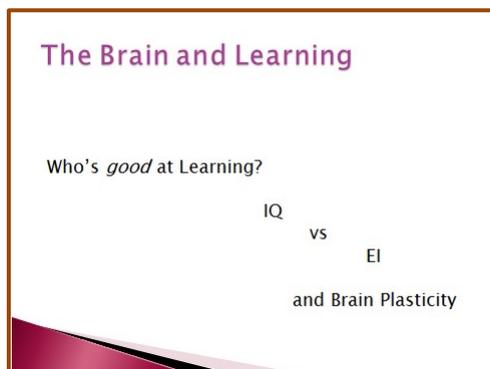
content vocabulary to accommodate the capability of the class. References to research and researchers have been included for the purposes of this dissertation and they would not necessarily be shared with students. (I suggest a reader should view each 'slide' first, then put on a 'teacher hat' when reading plain font and a 'learner hat' when reading italics.)

### 3.2 EISIL PowerPoint



Slide 1

#### Lesson 1: 'Who's good at Learning?'



Slide 2

► IQ and EI (Panju, 2008, pp. 5–19)

The students were introduced to the nature of the intervention when requesting permission to be part of the research process. They knew it was a 'program' about their brain designed to help their leaning. The first lesson introduced students to the difference between IQ and EI.

► IQ:

*Cognitive Intelligence refers to the ability to concentrate and plan, to organise material, to use words and to understand, assimilate and interpret facts. In a nutshell, it measures the potential to do well in our school work.*

► EI:

*Eric Jensen, member of the Society for Neuroscientists and author of several brain-based learning books, defines an emotion as a:*

*biologically driven cross-cultural response to an environmental stimulus and our emotions are important because they contain valuable data.*

*Our bodies talk to us through our emotions, our emotions communicate messages to others, our emotions are also impulses that compel us towards — or away from — various courses of action. Our emotions are a critical ingredient for optimal information processing (when a learner's emotions are engaged, the brain codes the content and the experience is marked as important and meaningful).*

*Understanding our emotions provides us with information about how we and others tick. The key is to listen to, and use, our emotions intelligently.*

*Like cognitive intelligence, Emotional Intelligence is difficult to define and there are a number of expected variations:*

*Mayer and Salovey (1997), who coined the term Emotional Intelligence, defined it as:*

*A learned ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions.*

*Daniel Goleman, the author of Emotional Intelligence (1996), says that:*

*Emotional intelligence is all about how you handle yourself, get along with people, and work in teams. It is the ability to motivate oneself, and assist in the face of frustration; to control impulse and delay gratification; to regulate one's moods and to empathise with others.*

*Emotional Intelligence matters because it enables us to achieve our best and to make a greater contribution to society. Emotions go hand in hand with reason. Emotions originate in the brain just as reason does, even though we might feel them in our heart or in our gut. They are equally valid when making decisions.*

The term Emotional Intelligence is commonly used in the United States and in business contexts. The term Emotional Literacy is most commonly used in the UK and in educational contexts — it is used to describe the relative ability to experience and productively manage emotions.

I used the term Emotional Intelligence that Goleman popularised, because he brought together the existing bodies of Emotional Intelligence research with an introduction to how emotion works on the brain and how to cultivate it in schools and workplaces.

► *IQ or EI? What's more important?*

*Without EQ (or EI), IQ remains a potential. IQ, which is a strategic or long-term capacity, does not and cannot predict success in life, while EQ is tactical, connected with immediate functioning, because it reflects how a person applies his/her knowledge to the immediate situation. IQ is not a reliable predictor of who will succeed in life. Goleman (1996) argues that emotional intelligence is of much greater importance than academic intelligence in developing a well-rounded person. He says: 'At best, IQ contributes about*

*20 per cent to the factors that determine life success, which leaves 80 per cent to other forces.'*

▶ *Can we learn EI?*

*EI can be nurtured, developed and augmented. We can increase our Emotional Intelligence any time in our lives as we learn and practise the skills that make up the concept of Emotional Intelligence. Successful schools include Emotional Intelligence in the curriculum because evidence shows that it is possible to influence a learner's Emotional Intelligence skills. People can be taught to become more Emotionally Intelligent, which enables them to become more successful in life. Teachers can instil in learners the ability to become emotionally self-aware, insightful regarding the motivation of themselves and others, more able to cope with emotional dilemmas and more empathetic towards their peers. They would also be more socially adept and able to solve problems effectively, resolve conflicts and excel in teamwork activities.*

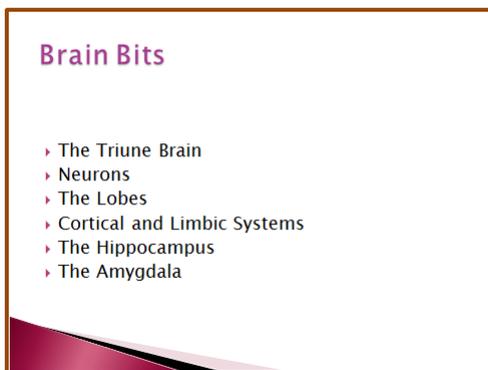
*Emotions and how we respond to them are learned. We learn these from personal experiences with parents, siblings, friends, teachers and mentors. We are simultaneously influenced by books, films, television, political leaders, sports heroes and other role models. We learn beneficial as well as ineffective or even harmful ways of responding emotionally. Most of this learning is without any deliberate effort on our part, but the message is we have the capacity to acquire improved and constructive ways of responding to situations.*

*We as individuals can learn and control how we feel and how we respond. Once aware of our emotions, we can make choices as to how to respond so that situations affect us most positively. These skills can be learned and then they are in our control.*

Experiencing some explicit lessons designed for students to acquire and understand EI skills to improve learning was a significant educational goal. We know the brain is plastic, and that it is possible to learn to change the ways we respond to our emotions.

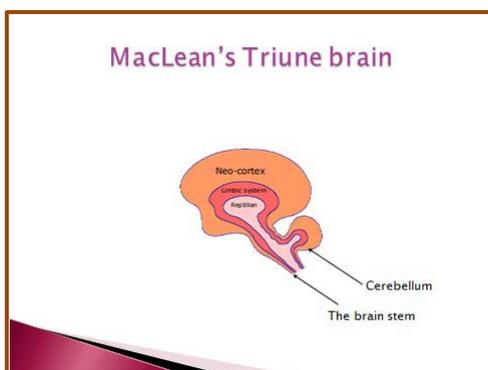
**Lesson 2: Brain Bits** (Dommett, Devonshire & Churches, 2011, pp. 14–65 and TRLP, 2007, pp. 6–7)

A summary of 'brain bits' provided students with knowledge of the parts of the brain that play a leading role in learning. Students were introduced to the term 'neuroscience' and the role fMRI has had in generating recent knowledge about our brain. Most had seen an fMRI machine in the media. Research in neuroscience has augmented knowledge about learning.



Slide 3

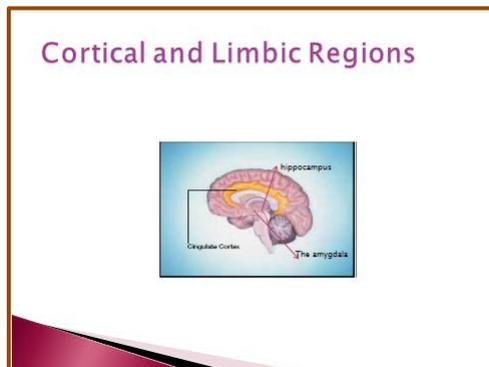
- ▶ The Triune Brain
- ▶ Reptilian, Limbic and Cortical Systems



Slide 4 Source: [website.lineone.net](http://website.lineone.net)

*If we slice the brain in half down the middle its inner structure would reveal three parts of the brain: the hindbrain or reptilian brain which is mainly concerned with just keeping us alive;*

*the midbrain or the limbic system which gives us our basic drives and is where our emotions originate; and the most recently evolved part of the brain, the forebrain or cortex where perception and thinking take place.*



Slide 5 Source: *TLRP (May 2007); adapted by Ryan (2011)*

▶ The Amygdala

*The hindbrain can still play a big— and largely negative — role in learning. Danger causes the hindbrain to spring into action to get one to fight or flee (reducing the influence of other areas of the brain that allow for thought, reason and higher-order learning). The amygdala processes this reaction before the cortex has had time to think about it.*

Students identified their likely response to an announcement that they have an exam next period to determine their classes for next year. Their amygdala fired!

▶ Cingulate cortex

*The forward part of the cingulate cortex appears to have a significant role in the allocation of attention (TLRP, 2007). Attention has a big effect on learning and retention of information.*

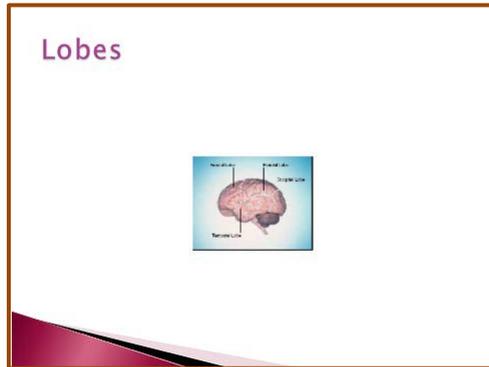
▶ The Hippocampus

*The Hippocampus is in our limbic system and is where our long-term memories are stored. Long-term memory is thought to be controlled through plasticity, i.e., the changes in the connections within the brain.*

► Brain Plasticity

*Some of the messages from psychology such as IQ and the notion of fixed intelligence have been challenged by notions that the brain is plastic. It constantly grows and changes in response to the environment and what the students experience.*

► The Lobes



Slide 6 Source: TLRP (May, 2007)

*The Frontal Lobe is responsible for movement and thought, taste and smell.*

*The Parietal Lobe is responsible for spatial awareness and touch.*

*The Occipital Lobe is responsible for vision.*

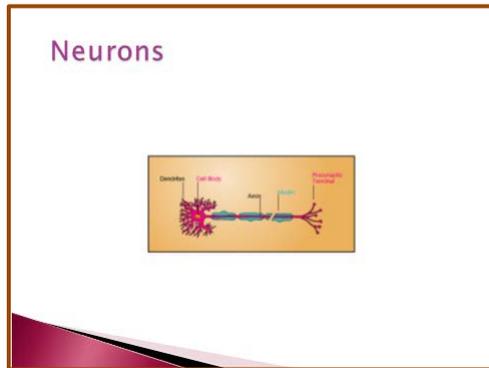
*The Temporal Lobe is responsible for audition and recognition.*

*The Frontal lobes are the part of the brain that neuroscientists would say is responsible for making you 'you'. They are only as effective as the information they are provided with.*

*The Frontal Lobes are important in decision-making and identifying consequences of various courses of action and to the students' amusement: 'do not reach closure in girls until 22–23*

years old, and in boys until 24–25 years old' (Dr Michael Carr-Gregg, Adolescent Psychologist: Lecture at Toormina High School, New South Wales, 3 November 2012).

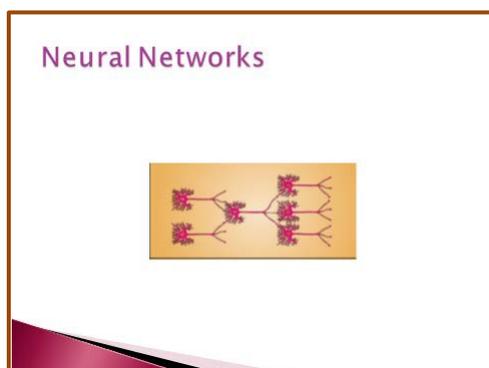
► Neurons



Slide 7 Source: TLRP (May, 2007)

These tiny little cells are the fundamental building blocks that allow the brain to work. Signals are passed between neurons by chemicals called neurotransmitters. Typically, these travel from the axon terminals of one neuron to the dendrites of another across a tiny gap (or synapse). Neurotransmitters excite or inhibit the receiving brain cell. In turn, the next cell sends a spike of electricity down its axon and the process continues through the brain. Myelin insulates the axon and helps regulate the flow of current. The result is a storm of electrical activity.

**Learning is the excitation of brain cells!**



Slide 8 Source: TLRP (May, 2007)

The repeated and combined firing of neurons is what makes you remember something.

*Educators and neuroscientists tend to have different working definitions of the word learning: Some scientists working in laboratories judge learning by the excitability of groups of brain cells under a microscope whereas educators judge learning in a slightly more traditional way — by the accumulation of knowledge and skills and/or levels of engagement.*

### **Lessons 3 and 4: Emotional Intelligence Competencies**

#### ▶ Emotional Intelligence Stance (Scott & Wilson, 2002)

I used the term Emotional Intelligence Stance to describe how productively we are managing our emotions and Emotional Intelligence Competencies to describe the areas that can be cultivated to improve learning in the classroom.

#### ▶ Multiple Intelligences

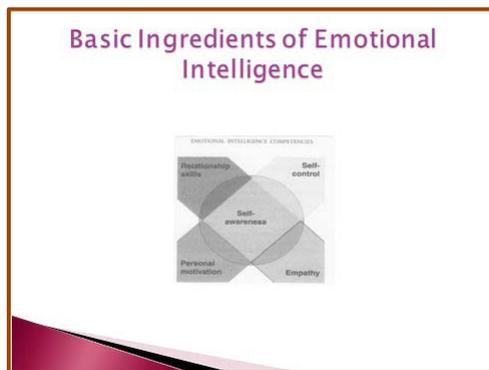
Intrapersonal Intelligences	Interpersonal Intelligences
Internal intelligences used to understand & motivate ourselves	External intelligences used to read, understand and manage our relationships with others
Self-awareness	Expressing our empathy
Self-control	Relationship skills
Personal motivation	

Slide 9 (Panju, 2008, p. 23)

This lesson draws upon students' knowledge of Gardner's Multiple Intelligences (knowledge acquired in primary school) and stimulates deeper discussion about the two personal intelligences. A class discussion regarding Gardner's (2006) Multiple Intelligences revealed that most students were exposed to the notion in primary school. Most students understood the Verbal-linguistic, Visual-spatial, Mathematical-logical, Musical and Kinaesthetic Intelligences. The level of understanding of Intrapersonal and Interpersonal intelligences was much lower. We revisited the notion of Intrapersonal and Interpersonal Intelligences and, given the greater cognitive maturity of Year 9, the students could now understand the concepts and the value of these Emotional Intelligence competencies.

We talked about 'Emotional Literacy', attempting to make the connection between better English literacy skills as well as Emotional Literacy skills to make schoolwork easier. The basic skills of Emotional Intelligence, according to Daniel Goleman (1998), are: *Self-Awareness, Self-Control, Empathy, Personal motivation, and Relationship skills.*

► Emotional Intelligence



Slide 10 (Panju, 2008, p. 24)

Slide 10 opens up discussion of the competencies of Emotional Intelligence as identified by Goleman (1998).

► Emotional Literacy



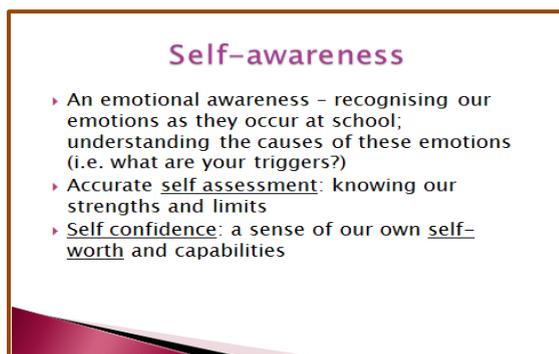
Slide 11

This slide led to discussion of Emotional Literacy: being able to manage our own emotions and the emotions of others and the value of being able to do this at school (Panju, 2008, p. 9). Tokuhamas-Espinosa (2011) proposes teachers need to help students become aware of how they feel not only about their subject but also about themselves and their classmates because affect and empathy are central to emotional intelligence (Goleman, 2006). She cites

Rothbart, Posner and Rueda (2008, p. 142) who say, 'Empathy is also strongly related to effortful control, with children high in effortful control showing greater empathy'. This means children with self-management skills are able to learn empathy and how to interpret the feelings of others with more success. Researchers such as Decety and Jackson (2004) and Singer (2007) are exploring the neural mechanisms underlying empathy and suggest teachers can capitalise on this neural process. Many activities used to stimulate EI in children ask them to reflect on what and why they felt the way they did in different emotional situations (e.g., anger or sadness). In many ways, the cultivation of EI is directly related to metacognitive skills, or the 'why' behind the actions.

The presentation then followed Panju's (2008) strategies for introducing and familiarising students with the concept of Emotional Intelligence in order to assist understanding emotional intelligence competencies and to begin to develop these competencies in the classroom setting.

► **Self-Awareness** (Panju, 2008, pp. 24–29)



**Self-awareness**

- ▶ An emotional awareness – recognising our emotions as they occur at school; understanding the causes of these emotions (i.e. what are your triggers?)
- ▶ Accurate self assessment: knowing our strengths and limits
- ▶ Self confidence: a sense of our own self-worth and capabilities

Slide 12

► Skills in *self-awareness*

### Skills in self-awareness

- ▶ Recognising our own emotions
- ▶ Understanding the causes and impact of our own feelings and actions on us and on others
- ▶ Recognising our strengths
- ▶ Being responsible
- ▶ Building on our self-image

Slide 13

*Self-awareness is the cornerstone of Emotional Intelligence. It includes:*

- *an emotional awareness — recognising our emotions as they occur at school*
- *understanding the causes of these emotions (i.e., what are your triggers?)*
- *accurate self-assessment: knowing our strengths and limits*
- *self-confidence: a sense of our own self-worth and capabilities.*

► What are the skills involved in *self-awareness*?

### Recognising our own emotions

- ▶ There are no right or wrong feelings
- ▶ We must be able to identify and label our feelings
- ▶ Denying our feelings leads to confusion, resentment and physical stress
- ▶ Even intense and uncomfortable feelings are softened when they are acknowledged without criticism or blame

Slide 14

*Recognising our own emotions:*

- *There are no right or wrong feelings*
- *We must be able to identify and label our feelings*
- *Denying our feelings leads to confusion, resentment and physical stress*

- *Even intense and uncomfortable feelings are softened when they are acknowledged without criticism or blame*

*Understanding the causes and impact of our own feelings and actions on us and on others*

- *Through careful observation we can learn what impact our feelings and actions have on others*
- *This knowledge helps us to become more effective in our interaction with others*



**Recognising our strenghts**

- ▶ 2 steps to improving performance:
  - Recognise our weaknesses as well as our strengths
  - Enhance our strengths while reducing our weaknesses

Slide 15

*We need to:*

- *recognise our weaknesses as well as our strengths*
- *enhance our strengths while reducing our weaknesses.*



**Being responsible**

- ▶ Choosing safe options and being responsible

Slide 16

and:

- choose safe options and be responsible

by:

- building on our self-image
- self-image is how we perceive ourselves
- it is important because how we feel and think about ourselves affects the way we act
- if we dislike some aspect of our self, it is important to do something about it.

#### ► Metacognition

Zins, Payton, Weissberg and Utne O'Brien in Matthews, Zeidner and Roberts (2007) state metacognition helps explain some of the learning processes that occur in SEL. In developing competence in problem-solving and decision-making, for example, students use metacognition in identifying the skills, strategies, and the resources needed for a task, and in determining how and when to use them. Tokuhamo-Espinosa (2010, p.122) also recommends that teachers allow time for metacognition in class to maximise memory consolidation, a key to improved performance.

Emotions impact on perception, cognition, motivation, critical thinking and behaviour and recent brain development research shows SEL education can strengthen neocortical control and self-awareness. 'If students are unable to recognise their academic emotions and then regulate them, they cannot think about their thinking' (Wheaton, 2012, p. 38).

#### ► Why is it important to be self-aware?

*Being self-aware has given us a huge evolutionary advantage — not only are we able to think, we are also able to 'think about our thinking'. This means that we have the ability to control and manage the more primitive part of the brain (emotional intelligence). As*

neuroscientists Immordino-Yang and Damasio (2007) have pointed out, all thinking and action are underpinned by emotion. If we are unaware of or do not understand our internal state, we can be engulfed in emotions and lose control. This can have disastrous effects.

► Emotional Hijacking (Panju, 2008, p. 26)

**Emotional hijacking**

- If we are unaware of or don't understand our internal state, we can be engulfed in emotions and lose control
- This can have disastrous effects
- It has been described by Goleman as a feeling of being 'flooded' or overwhelmed by feelings – an emotional hijacking
- The less 'self-aware' we are, the more likely we are to be able "hijacked"
- By knowing what we are feeling and how we are behaving allows us a degree of control over our own behaviour

Slide 17

*Emotional Hijacking has been described by Goleman as a feeling of being 'flooded' or overwhelmed by feelings —an 'emotional hijacking'. The less 'self-aware' we are, the more likely we are to be 'hijacked'. Knowing what we are feeling and how we are behaving allows us a degree of control over our own behaviour.*

Students then completed a number of activities designed to increase their Emotional Intelligence vocabulary and be able to label their own emotions and the emotions of others.

► Expanding Our Emotional Vocabulary (Panju, 2008, p. 27)

**Activity A:** Brainstorm synonyms of 'emotion words'

Happiness	Anger	Sadness
Excited	Fury	Grief
Joyful	Rage	Sorrow

Slide 18

Students wrote down and shared further synonyms for the listed emotions.

## Expanding our emotional vocabulary (cont.)

- ▶ B) From the magazine pictures – 'Guess my feelings'
- ▶ C) 'Tracking my feelings diary' – keep a diary for the week
  - Do a feeling check throughout each day
  - Label the feeling and rate it on a 10-point scale where 1 = weak or vague and 10 = very powerful
  - Diary headings could include:
    - Thought
    - Feeling
    - Action
    - Outcome
    - Date/time
    - What was I thinking?
    - How did I feel?
    - What did I do?
    - Consequences

Slide 19

### **Activity B:** From the magazine pictures — 'Guess my feelings'

A variety of magazines was issued to students, and in pairs they attempted to identify the emotions of the people on different pages.

### **Activity C:** 'Tracking my feelings diary' — keep a diary for the week

Do a feeling check throughout each day.

Label the feeling and rate it on a 10-point scale where 1 = weak or vague and 10 = very powerful.

Diary headings could include:

- Thought
- Feeling
- Action
- Outcome
- Date/time
- What was I thinking?
- How did I feel?
- What did I do?
- Consequences

Students preferred to complete this activity each time we met. Although all students completed the activity, they did not necessarily want to share a response with the group. Students appeared to struggle at first with this activity and then connected the labelling of their emotions and describing the intensity of that emotion when I modelled it for them.

► **Self-Control** (Panju, 2008, pp. 29–31)

A presentation slide with a white background and a brown border. The title 'Self-control' is in purple. Below it are two bullet points in black text. The bottom left corner of the slide has a decorative purple and black gradient.

**Self-control**

- ▶ Self control enables us to handle our feelings in an appropriate and proportional way so that they facilitate rather than interfere with our task at hand
- ▶ It is about being able to cope with strong feelings and not being overwhelmed and paralysed by them

Slide 20

*Self-control enables us to handle our feelings in an appropriate and proportional way so that they facilitate rather than interfere with our task at hand. It is about being able to cope with strong feelings and not being overwhelmed and paralysed by them. Self-control involves:*

- *Managing our emotional reactions: keeping disruptive emotions and impulses in check.*
- *Conscientiousness: taking responsibility for personal performance, controlling our impulses, delaying gratification to pursue goals and recover from emotional distress.*
- *Being adaptable: showing flexibility in handling change and being comfortable with new ideas, novel approaches and new information.*

We revisited the term 'Emotional Hijacking', exploring the metaphor of transport hijacking and the loss of control we may experience in that situation. Several strategies were offered to assist students to control their amygdala's response to a 'fight or flight' situation in a

classroom. Several trigger situations were discussed, such as: tests; the introduction of new content; inability to understand a concept, task or assignment; peer pressure; and teacher reprimands.

- ▶ What are the skills involved in *Self-control*?

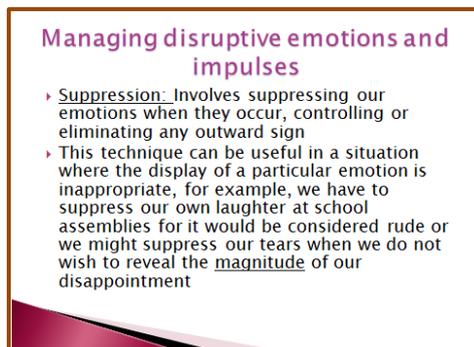


**Skills involved in self-control**

- ▶ Managing disruptive emotions and impulses
- ▶ Delaying gratification
- ▶ Choosing appropriate responses based on understanding the situation or circumstances we are in
- ▶ Self-control and applying appropriate expressions in our emotions
- ▶ Expressing anger without fighting: anger management

Slide 21

- ▶ Managing disruptive emotions and impulses:



**Managing disruptive emotions and impulses**

- ▶ Suppression: Involves suppressing our emotions when they occur, controlling or eliminating any outward sign
- ▶ This technique can be useful in a situation where the display of a particular emotion is inappropriate, for example, we have to suppress our own laughter at school assemblies for it would be considered rude or we might suppress our tears when we do not wish to reveal the magnitude of our disappointment

Slide 22

*Suppression: Involves suppressing our emotions when they occur, controlling or eliminating any outward sign. This technique can be useful in a situation where the display of a particular emotion is inappropriate, for example, we have to suppress our own laughter at school assemblies for it would be considered rude or we might suppress our tears when we do not wish to reveal the magnitude of our disappointment.*

## Managing disruptive emotions and impulses

- ▶ **Reappraisal:** This technique involves mentally changing the situation - what does this really mean for me?
- ▶ **Distraction:** In this method, we can handle negative emotions by turning attention away from the distress-producing stimulus to something less arousing. By using meditation, other relaxation techniques, exercise we can re-focus
- ▶ **Get help:** We respond to the need for emotional control by seeking help from others. You might see your Year Advisor or the Learning Support Teacher

Slide 23

- *Reappraisal: This technique involves mentally changing the situation — what does this really mean for me?*
- *Distraction: In this method, we can handle negative emotions by turning attention away from the distress-producing stimulus to something less arousing. By using meditation, other relaxation techniques, or exercise, we can re-focus.*
- *Get help: We respond to the need for emotional control by seeking help from others. You might see your Year Advisor or Learning and Support Teacher.*

## Lessons 5 and 6: Delaying gratification and Building on our self-image

- ▶ Delaying gratification (Panju, 2008, pp. 31–32)

### Delaying gratification

- ▶ Delaying gratification is the ability to wait in order to obtain something that one wants
- ▶ The famous Marshmallow test
- ▶ What techniques did they use to avoid temptation and delay gratification?
- ▶ What was the surprise?

Slide 24

Teaching students about the value of delaying gratification in order to achieve future goals is illustrated by the 'Marshmallow' experiment. Infants were given the opportunity to delay eating one marshmallow with the promise of another if they could wait. The infants were tracked in later life. Those who were able to delay consumption of the first marshmallow

were found to have better academic performance than those who could not wait. The infants had various techniques they could use to divert their thoughts from the 'marshmallow', and we discussed strategies we could use to 'keep focused' on our greater learning goals.

- *Delaying gratification is the ability to wait in order to obtain something that one wants.*

### Activity D:

The famous Marshmallow test (video shown): [www.youtube.com/watch?v=QX\\_oy9614HQ/](http://www.youtube.com/watch?v=QX_oy9614HQ/)

**What did the children do?**

- ▶ they talked or sang to themselves, inventing simple games, dozed off
- ▶ And a decade later:
  - The children who had been best at delaying gratification:
    - had better academic and social skills
    - had higher 'SAT's
    - were less likely to be distracted
    - were more motivated to succeed
    - were better at making and keeping friends
    - had many of the 'habits' of successful people – confidence, persistence and capability to cope with frustration.

Slide 25

*What techniques did they use to avoid temptation and delay gratification?*

- *they talked or sang to themselves, invented simple games, dozed off*

*And the surprise? A decade later: The children who had been best at delaying gratification:*

- *had better academic and social skills*
- *had higher 'SAT's (test results)*
- *were less likely to be distracted*
- *were more motivated to succeed*
- *were better at making and keeping friends*
- *had many of the 'habits' of successful people — confidence, persistence and ability to cope with frustration*

- ▶ The children who had eaten their marshmallow immediately....

when time to study for the big test, they tended to get distracted...

...into listening to their favourite music  
...or watching TV rather than revising!

Slide 26

*The children who had eaten their marshmallow immediately did not have such successful outcomes.*

*So, when it is time to study for the big test, do you tend to get distracted...*

- *by listening to your favourite music or playing X-box?*
- *or watching TV rather than revising?*

### **The Marshmallow test persists in adult life**

- ▶ Activities that can give us immediate gratification but undermine longer-term benefits

Slide 27

*The Marshmallow test persists in adult life:*

- *Activities that can give us immediate gratification can undermine longer-term benefits.*

► Building on our self-image

**Building on our self-image**

- ▶ Self-image is how we perceive ourselves
- ▶ It is important because how we feel and think about our self affects the way we act
- ▶ If we dislike some aspect of our self, it is important to do something about it

Slide 28

**Activity E: 'Who am I?' Mind Map and Venn diagram (Panju, 2008, p. 27)**



Slide 29

*Self-image is how we perceive ourselves. It is important because how we feel and think about our self affects the way we act. If we dislike some aspect of our self, it is important to do something about it.*

Students focused on themselves and then contrasted themselves with a person they admire. Students listed their own attributes as above on the diagram. They then completed it for someone they admire. Next, they created a Venn diagram to illustrate the ways they are similar to or different from the person they admire. This activity encourages students to think about how they feel about themselves, the first step to recognising emotions and how to act upon those emotions. This is very much a personal activity, not necessarily one for sharing.

**'Who am I?'**

Choose a person you admire...

Compare and contrast the ways you are similar to you or different from the person you admire

Create a VENN diagram and consider the following:

- Appearance
- Abilities
- Interests
- Intelligence (IQ) strengths
- Emotional strengths
- Work ethic

**Slide 30**

### **Activity F:**

*Choose a person you admire...*

- *Compare and contrast the ways you are similar to or different from the person you admire.*

*Create a Venn diagram and consider the following:*

- *Appearance*
- *Abilities*
- *Interests*
- *Intelligence (IQ) strengths*
- *Emotional strengths*
- *Work 'ethic'*

### **Lessons 7 and 8: Self-control and applying appropriate expressions in our emotions**

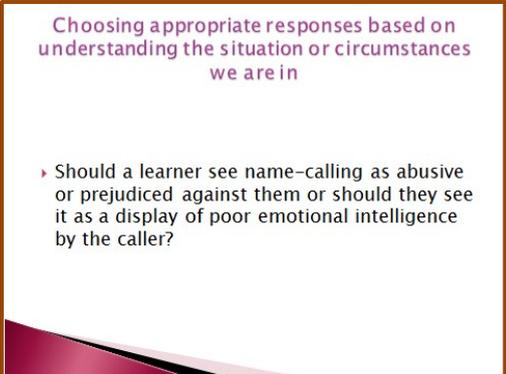
(Panju, 2008, pp.32–33)

Self-control can enable us to choose how we see a situation: Choosing appropriate responses based on understanding the situation or circumstances we are in.

Stressful school environments are counterproductive as they reduce student ability to learn. Sylwester (1998) recommends students develop forms of self-control of inefficient venting of emotion. As memories are contextualised activities that draw out emotions, he suggests

teachers use simulations and role play because they tie 'to the kinds of emotional contexts in which they will later be used'. He believes a focus on metacognitive activities that encourage students to talk about their emotions, listen to their classmates' feelings, and think about the motivations of people who enter their curricular world will give most emotional support to learning (pp. 33–38).

**Activity G:** Discussion Question — 'Playground scenario of name-calling'

A rectangular slide with a white background and a brown border. The top text is in purple, and the bottom text is in black. There is a decorative purple and black gradient shape at the bottom left corner of the slide.

Choosing appropriate responses based on understanding the situation or circumstances we are in

- ▶ Should a learner see name-calling as abusive or prejudiced against them or should they see it as a display of poor emotional intelligence by the caller?

Slide 31

*Should a learner see name-calling as abusive or prejudiced against them or should they see it as a display of poor emotional intelligence by the name-caller?*

Students discussed various scenarios of name-calling and considered ways of dealing with it, including the impact on self and the importance of calling it to a teacher's attention. Critical outcomes of the discussion are for students to understand that it is the 'name-caller' who has a lack of Emotional Intelligence and to consider how they might manage their emotions in that situation.

Self-control and applying appropriate expressions for our emotions

- ▶ Retaliating angrily in the playground may give the learner the applause of friends but it may only signal bigger troubles with the Head Teacher!

Slide 32

*Self-control means being able to control those unproductive behaviours that really do not get us anywhere. Retaliating angrily in the playground may give the learner the applause of friends but it may only signal bigger troubles with the Head Teacher!*

**Activity H: Discussion Question — 'Consequences'**

*Students examined the consequences of not managing their emotions and being 'emotionally hijacked' in this situation. 'Delaying gratification' of the perpetrator being punished was difficult for some to accept. They could certainly see the value in a classroom situation of drawing it to the teacher's attention for admonishment.*

- ▶ Expressing anger without fighting: Anger Management (Panju, 2008, pp. 33–35)

Expressing anger without fighting:  
Anger Management

- ▶ Anger has three components
  1. The emotion itself
  2. The expression of anger...facial expressions, crying, sulking
  3. Understanding of the anger...interpreting and evaluating the emotion
- ▶ Dealing with Anger
- ▶ Assertiveness not Aggressiveness
- ▶ Self-Control

Slide 33

*Anger has three components:*

- *The emotion itself*
- *The expression of anger...facial expressions, crying, sulking*
- *Understanding of the anger...interpreting and evaluating the emotion*

▶ Dealing with Anger...in the classroom

EISIL is designed to assist students to focus on learning, rather than address the issue/s that may have provoked anger. If students are able to manage their emotional response to situations, they can buy themselves time to plan a strategy to deal with the provocation. Students learned a calming-down technique and strategies to get what they need in class without being angry or disengaging from the learning activity.

▶ Assertiveness not Aggressiveness

Students learned assertive and sensitive techniques of approaching the teacher for help or waiting for a better time to ask a question in order to get their learning needs met. This strategy was found particularly useful when the teacher may be involved in whole-class lesson delivery or behaviour management.

▶ Why is *self-control* important?

*Instead of just accepting our emotional state, we can act towards changing it, and make it work for us. We can control arousal levels so as to consistently maximise our performance levels; persist in pursuing our goals despite frustration and temptation; inhibit destructive responses to provocation; and act appropriately despite pressure to do otherwise.*

▶ Calming down: Meditation and Mindfulness Technique

McSweeney (2013, p.5) describes Mindfulness as 'a self-awareness practice that encourages people to accept their thoughts in a non-judgemental way. It is also increasingly popular outside of psychologists' rooms as a more constructive tool to promote emotional intelligence and resilience.' She reports that Linda Lantieri (the former New York City School Principal who has led curriculum change to bring SEL and mindfulness to students) is seeing results in adults she once taught ... They did better in school ...They are successful in life and work.

### **Activity I: Meditation and Mindfulness**

A strategy to teach students 'how to quiet their minds, calm their bodies and manage their emotions more skillfully' is introduced here — one and a half lessons based on Lantieri and Goleman's (2008, pp. 97–141) *Building Emotional Intelligence exercises on CD for Relaxing the Body and Focusing the Mind*. I refer to concepts we have studied within their introductions and then play the CD. Lantieri and Goleman assert that if students contrast how they feel in a relaxed state and in a stressful one, they will better understand the 'fight, flight or freeze response of their bodies'.

### **Exercise to Calm the Body**

The students are introduced to the idea of having a lesson to help them calm their minds and relax their bodies. They contrast how they feel in a relaxed state and in a stressful one, and understand the 'fight, flight or freeze' response of their bodies. They learn three techniques for releasing tension stored in their bodies: deep belly breathing, progressive muscle relaxation and a body scan. Lantieri and Goleman (2008, p. 102) emphasise the value of dealing with stress.

Scientists have been finding out that knowing how to deal with stress is important for health. They say that being able to manage our stress has all kinds of benefits. It can improve our attention, so we can concentrate better. That can help us more easily remember all the things we know — when we take a test, for example. We can even make better decisions, be more creative, and of course, be healthier and happier.

Students were asked to think about a time in recent days when they felt very stressed or were really upset ... it might have been a person who upset them, or a situation like taking a test. They then think of how they feel when they are stressed: jumpy, fast breathing, cannot

sit still, shaky hands , shaky legs, cold hands, cold feet, heart beating fast, getting angry easily, dry mouth, upset stomach, sweating or a hard time falling asleep.

*Stress is then explained to the students: Stress is not stress until we experience it in our bodies and have a physiological reaction in our bodies. Stress is a result of what happens in our bodies. The things that cause stress — people, places, or events — are not actually stress until the mind sees it that way and the body responds. These demands are called stressors. If we respond to this person, place, or event by feeling upset and tense, then we call this a 'stress trigger'. This situation triggers an automatic response in our bodies: YES, our amygdala! Either the fight or flight or freeze response. We know this is designed to possibly save our lives!*

*But sometimes we think something is an emergency and it is really a false alarm. Sometimes you cannot tell the difference and before we know it, we are getting ready for an emergency even though there isn't any real danger. When the stress response goes off, our brains release all kinds of chemicals so that we have the strength to face a dangerous situation. But when it is not really a dangerous situation, these chemicals start to make our bodies weaker, not stronger and they start to affect our health.*

*By learning how to calm our minds and relax our bodies, we can cut down on the number of false alarms. We can learn to change how we react to stress, and thereby gain more control of our emotions.*

### **Exercise to Focus the Mind**

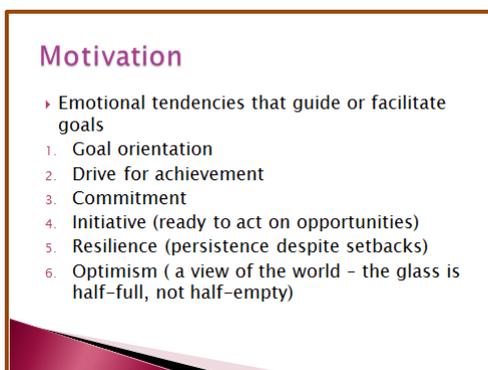
Students are introduced to the practice of mindfulness, which quietens the mind and focuses attention using the breath as a focal point. Mindfulness is a way of paying attention to the present moment without judgment. The guided experience of mindfulness on the CD

introduces students to the breath as an anchor for bringing the wandering mind back to attention. Stoops (2005) suggests mindfulness instruction has the potential to promote higher-order cognitive skills that assist deeper understanding, student motivation and engagement.

*The opportunity for stillness is really important. So often we do not have time to reflect upon things. We go on automatic pilot and don't register the deeper meaning of what we are experiencing. When you get upset and are not sure what is happening you might be able to use this technique to begin to gain control of your emotions and calm yourself down.*

*The strategies focusing on meditation and mindfulness move some of the key elements of emotional intelligence into a deeper dimension. They are designed to increase your self-awareness and self-control by consciously trying to focus on the present. We then move into future territory, considering how we can focus and achieve our goals.*

► **Motivation** (Panju, 2008, pp. 44–48)



**Motivation**

- Emotional tendencies that guide or facilitate goals
- 1. Goal orientation
- 2. Drive for achievement
- 3. Commitment
- 4. Initiative (ready to act on opportunities)
- 5. Resilience (persistence despite setbacks)
- 6. Optimism ( a view of the world - the glass is half-full, not half-empty)

Slide 34

*Motivation Skills are made up from the emotional tendencies that guide or facilitate goals.*

*These include:*

- *A drive for achievement: striving to improve or meet a standard of excellence*
- *Commitment: aligning with the goals of the group or class*

- *Initiative: readiness to act on opportunities*
- *Resilience: persistence in pursuing goals despite obstacles and setbacks.*

*People with low self-motivation are inclined to be overwhelmed by affective states, sometimes to the point of paralysis, and they 'rarely get the job done'. As we develop our sense of personal motivation, we begin to use self-help talk and focus on goals. Finally, in a state of high personal motivation we are constantly reframing our thinking and restructuring our tasks. Self-motivated individuals are able to begin a task, stick with it, and move ahead to completion, all the while dealing with any setbacks that may arise. People with high self-motivation are able to focus and concentrate well, and to channel both their cognitive and affective skills into achievement-oriented behaviour.*

▶ *What are the skills involved in personal motivation?*

- *Goal orientation*
- *We must first decide what we want. This involves marshalling our emotions in order to reach our goals: paying attention, focusing on the task at hand*
- *Setting challenging goals and taking calculated risks. This requires self-control and self-discipline — the ability to delay gratification and make choices. It might also need commitment and resilience (persistence despite setbacks)*
- *Initiative (ready to act on opportunities)*
- *Optimism (a view of the world — the glass is half-full, not half-empty)*

▶ *Why is personal motivation important?*

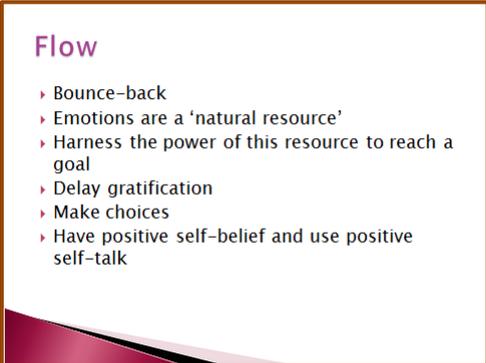
*Personal motivation enables us to use our emotions to achieve our goals. Personal motivation brings meaning to life. All individuals must find within themselves something they want to achieve, be, or do. Then, they can find 'flow'.*

## ► Flow

Marshall (2004, p. 67) talks about the emotional function of the brain that can either support or antagonise engagement in learning:

Where the level of challenge is appropriate and the cost of risk-taking is low, learners may experience a state of 'flow' (Csikszentmihalyi, 1990), a feeling of enjoyment, reward and satisfaction that comes from involvement and completion in, and contribution to the learning process. On the other hand, where the likelihood and cost of failure is high, the brain can be 'hijacked' (Goleman, 1996) towards feelings of helplessness and concern about survival.

Students were introduced to the value of trying to achieve 'flow' in their learning by thinking about harnessing their emotions as a natural resource.



**Flow**

- Bounce-back
- Emotions are a 'natural resource'
- Harness the power of this resource to reach a goal
- Delay gratification
- Make choices
- Have positive self-belief and use positive self-talk

Slide 35

*Research by psychologist Mikhail Csikszentmihalyi (1990) showed that activities that both challenge and permit us to draw on existing knowledge are most likely to send us into a state of 'flow'.*

- *Think of our emotions as a kind of natural resource. Using emotions successfully means being able to harness the power of this resource in order to achieve our goal.*
- *Doing something that sends us into 'flow' every day helps us bounce back. It gives us resilience in the face of setbacks.*

- *Have a positive self-belief and use positive self-talk. Negative emotional states narrow the focus and constrict the way one engages with the world. Positive emotional states broaden the focus and the availability of options at all times.*

Students discuss the moments they can find 'flow' such as when playing sport, when walking, playing computer games, playing or making music. They all observed how refreshed it made them feel and they agreed that trying to have that moment each day would be valuable to their well-being and attitude to balancing school work and leisure time.

Linda Lantieri calls for the use of these strategies to develop students' 'internal armour' for resilience in life. Neurotransmitters act as chemical messengers in the brain and the dopamine pathway is particularly important as its function is to generate positive feelings. 'As motivationally significant events come and go throughout the day, the brain detects some of these events as 'biologically significant' and releases dopamine that generates good feelings and stimulates goal-directed approach behaviour' (Reeve, 2005, p. 68). I felt inclusion of these strategies, along with the others in the EISIL, could be a student's 'easel' for lifelong learning. Reeve (2005) asserts that motivation cannot be separated from the social context in which it is embedded and motivation is often deeply rooted in interpersonal relationships. We then moved from focusing on self to focusing on others.

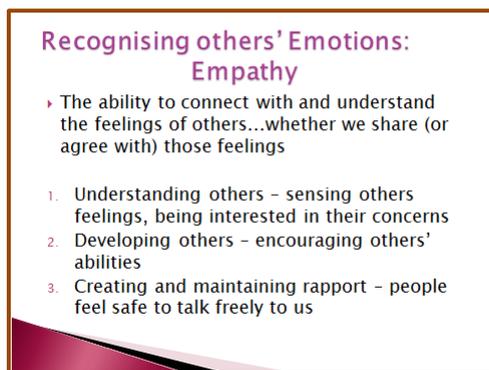
### **Lesson 9 and 10: Recognising and Managing Others' Emotions**

Blakemore (2008) proposes that there are presumably large differences between individuals in the development of the social brain, but these have so far been neglected in the literature. She suggests this may be because adolescents are more skilful in completing complicated social cognition tasks in the laboratory than they are at dealing with situations that arise in everyday life. She advocates that more naturalistic paradigms might be useful in addressing this question. The study of students using EISIL to navigate in social situations in the

classroom is an example of this alternative paradigm. Singer and Lamm (2009) note the emergence of the field of social neuroscience has enabled substantial insight into the neural underpinnings of empathy in the past few years. However, we are just starting to understand the neuronal and behavioural foundations of empathy.

### **Empathy** (Panju, 2008, pp. 39–44)

Empathy relies in part, on our brain's spontaneous transformation of what we see in what we would have felt. Our brain activates the inner state of people we observe (Keysers & Gazzola, 2009). Our mirror neuron system shapes our empathic skills and our interpersonal competence (Iacoboni, 2008). Adolescents need opportunities to value empathy and foster positive relationships in the classroom to enhance learning.



**Recognising others' Emotions:  
Empathy**

- ▶ The ability to connect with and understand the feelings of others...whether we share (or agree with) those feelings
- 1. Understanding others - sensing others feelings, being interested in their concerns
- 2. Developing others - encouraging others' abilities
- 3. Creating and maintaining rapport - people feel safe to talk freely to us

Slide 36

#### ▶ Recognising others' Emotions

#### ▶ Managing others' Emotions

- *The ability to connect with and understand the feelings of others, whether we share (or agree with) those feelings*
- *Understanding others — sensing others' feelings, being interested in their concerns*
- *Developing others — encouraging others' abilities*
- *Creating and maintaining rapport — people feel safe to talk freely to us.*

▶ What are the skills involved in *empathy*?

- *Recognising feelings in self and others*
  - *Being aware of our own feelings enables us to undertake the next step of becoming aware of another's feelings*
- *Taking the perspective of others*
- *'Putting themselves in someone else's shoes'*
  - *This expression caused great delight in the classroom. Some students had difficulty in understanding the metaphor and students went to great lengths to help their classmates come to an understanding of it*
- *Listening carefully to others*
- *Good listening (which includes asking subtle questions, filling in the gaps, and emotionally intelligent guesswork) is essential, as is the ability to interpret non-verbal cues*
- *Appreciating diversity*
  - *This means accepting others and tolerating differences, which enables us to be sensitive and respectful to the feelings of others.*

▶ Why is *empathy* important?

**Emotional Literacy (2)**

▶ Managing others' Emotions...

'You sound very upset'

'I can see you are really uncomfortable with this'

'I can see you are very busy right now Sir, could you give me hand in a moment, please?'

...do better at school, in social situations, in one's career and in relationships

Slide 37

*The ability to understand how someone else feels is a vital building block for all social competencies and/or interactions. Empathy allows us to create and maintain a rapport with a broad diversity of people. Learners who can demonstrate empathy tend to do better in*

*school, in social situations, in their adult careers and relationships. When learners understand how others feel, they are less likely to victimise them through bullying.*

*Some helpful empathetic statements include:*

- *You sound very upset.*
- *I can see you are really uncomfortable about this.*
- *That must have been difficult for you.*
- *It sounds like you've been feeling a lot of pain inside.*

Martinez (2006, p. 699) recommends that metacognition should be modelled by teachers:

'When a teacher "thinks aloud", particularly during problem-solving, his or her verbalizations can be a powerful source of cognitive processing that can be internalized by students.' He describes it as 'making thinking audible'. He also suggests that social interaction among students should be used to enhance their metacognitive capacity. Their spoken reasoning makes their thinking available to one another. He also recognises that metacognition also involves emotional and motivational considerations, cautioning that as 'metacognition is required in demanding situations, it entails the management of emotions that often accompany difficulty, uncertainty, and the possibility of mistakes and failure'. Students who are in a confrontational situation with a teacher may have to experience a number of failures before they can improve their relationship with a teacher. However, success in difficult situations may mean that 'metacognition might also involve learning positive emotions as sociated with accomplishment, focus, overcoming obstacles, and the possibility of creative solutions'.

### **Activity J:**

These slides were created to assist students to apply the 'managing others' emotions' in the context of their teachers' emotions. Jordan and LeMetais (2004) describe a variety of situations that can often give rise to student–teacher confrontation in the classroom. It might arise due to a lack of clarity in teacher expectations of students' attitude and effort. If

students lack both empathy and social skills they may misinterpret a teacher's intentions and normal interactions may be perceived as confrontational and stimulate an aggressive response. Third, a teacher may react to a student's reputation rather than the actual level of disruption or may overreact to a student's misdemeanour. This lack of empathy or poor display of teacher EI may incite inappropriate behaviour by the student.

Students had the opportunity to role play different scenarios with each other and with me, for example, listening to a friend's concern, negotiating a parent/carer concern regarding their late arrival at home and asking their teacher for help in a busy classroom.

*Mis-identification of feelings is one of the major issues in relationships — so, make sure you are recognising the correct emotion. Sometimes teachers feel cranky because they see wasted potential in a student or they are trying to manage a classroom situation and show this in a negative rather than supportive way.*

#### What do you do if you see this in your teacher?

Empathy, Empathy, Empathy! Yes, even with your teacher!

Misidentification of feelings is one of the major issues in relationships – so, make sure you are recognising the correct emotion

Sometimes teachers feel cranky because they see wasted potential in a student and show this in a negative rather than supportive way

Slide 38

#### Try this:

- ▶ Rather than build up a store of resentment, try showing your true feelings...
- ▶ 'I feel uncomfortable about not understanding the question' or 'I don't get this'...rather than 'this is ....'
- ▶ Make sure your body language matches your true emotions

Slide 39

### And this:

- ▶ When you do 'get' something, give your teacher feedback—quickly, quietly if need be, even on the way out of class
- ▶ Most teachers get a 'high' or 'buzz' in their limbic system from seeing students learning: a very positive emotion!
- ▶ Most teachers will recognise a student making a change in their learning attitudes and behaviours and be delighted! Ask them to keep it 'on the down low' in class if necessary!

Slide 40

- ▶ *What do you do if you see this in your teacher?*

*Try this:*

- *Rather than build up a store of resentment, try showing your true feelings.*
- *'I feel uncomfortable about not understanding the question' or 'I don't get this'...rather than 'this is ....'.*
- *Make sure your body language matches your true emotions.*
- *'I can see you are very busy right now Sir, could you give me hand in a moment, please?'*

*And this:*

- *When you do 'get' something, give your teacher feedback — quickly, quietly if need be, even on the way out of class*
- *Most teachers get a 'high' or 'buzz' in their limbic system from seeing students learning: a very positive emotion!*
- *Most teachers will recognise a student making a change in their learning attitudes and behaviours and be delighted! Ask them to keep it 'on the down low' in class if necessary!*

- ▶ *Relationship skills* (Panju, 2008, pp. 48–52)

**Relationship Skills**

- ▶ Skills for dealing with others to get the desired results from them and reach personal goals
- ▶ Key to popularity, leadership and interpersonal effectiveness
- 1. Communicate – listen effectively, send convincing messages
- 2. Influence – effective tactics for persuasion
- 3. Co-operate – with others and in teams
- 4. Manage conflict – negotiate

Slide 41

*These skills are for dealing with others to get the desired results from them and reach personal goals. Such skills are the key to popularity, leadership and interpersonal effectiveness. They would include ability to:*

- *Communicate: listening openly and sending convincing messages*
- *Influence: employing effective tactics for persuasion*
- *Cooperate: with others and work harmoniously in teams*
- *Manage conflicts: by negotiating and resolving disagreements*

- ▶ *What are the relationship skills?*

*Effective communication*

- *In group work this means knowing how to join in with what is happening first, before attempting to change a group's behaviour*
- *Cooperative learning*
- *In group work this could mean knowing how to manage oneself and get along with others*
- *How to handle anger (one cannot blow up in a group and get away with it)*
- *How to motivate oneself*
- *How to persist when the task becomes difficult*
- *How to resist temptation and stay fixed on a goal*
- *How to work towards a common goal*

- *How to know when to take the lead and when to follow*

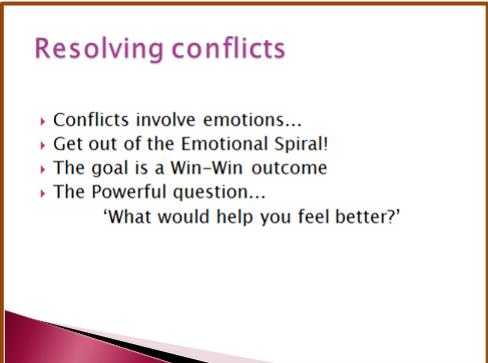
### *Assertiveness*

- *We need to see ourselves as being of worth and having a right to enjoy life.*
- *Assertive statements have three parts: the facts — describing the situation; the feelings — aroused in us (or the effect the situation has on us); and finally the want — asking for a specific action or behaviour agreeable to us.*
- *An example might be how you respond to another student taking your pen without asking.*
- *Being assertive will raise your self-esteem by resisting bullying tactics and emotional blackmail without using aggression.*

### **Activity K:**

The students, led by me, role play the activity of asking for something that they want: Using 'I' statements to express their emotions and indicate what they want from the other person. This is a strategy to build the transferability of this skill into other situations. The students practise the strategy to gain familiarity with the words they might use and the emotions they might feel. This repetition is expressed in the literature as a way of strengthening their neural pathways (Blakemore & Frith, 2005; Wolfe, 2010).

### ▶ Resolving conflicts



**Resolving conflicts**

- ▶ Conflicts involve emotions...
- ▶ Get out of the Emotional Spiral!
- ▶ The goal is a Win-Win outcome
- ▶ The Powerful question...  
    'What would help you feel better?'

Slide 42

Conflict resolution:

- *There are two traditional ways of responding to conflict: fight or flight. There is a third: Solving the problem through dialogue or talking about it.*
- *People in conflict are generally locked into a self-perpetuating emotional spiral in which the declared subject of conflict is rarely the key issue.*

Kovalik and Olsen (1998) view middle-level teachers as perhaps the most aware of all K–12 educators about the emotional needs of their students:

As their students oscillate from child to adult to adolescent, they see how emotions rule their students and their classrooms ...The importance of relationship cannot be overstated. If students do not feel they have a relationship with their teacher and classmates, they have nothing to gain or lose by their behaviour in the classroom. The classroom thus becomes just one more social context in which they feel disconnected, uninvolved, and unwilling to invest in the success of the group (p. 33-34).

Beland (2007) believes 'students need a sense of community to perform well academically' (p. 70) and it takes time and practice to develop social skills.

### **Resolving conflict with the teacher:**

*A self-perpetuating emotional spiral often happens in the case when a teacher and student are locked in conflict. It is often very hard for a teacher to ignore minor student infractions and the situation may spiral because of the student's tone or the teacher's tone with the student and have nothing to do with the original misdemeanour. Usually, the student comes away with punishment, and is resentful. The goal is to have a win–win outcome.*

*One might ask a powerful and positive question: 'What would help you feel better?' Most students would prefer a positive relationship with their teachers and thus, some empathy for them and what they are trying to do to assist students' learning can go a long way to improving the whole-class learning environment.*

### **Activity K:**

Again, the students, led by me, role play the activity of negotiating with their teacher, using 'I' statements to express their emotions and indicate what they need from the teacher. This strategy builds the transferability of this skill into other situations by harnessing the impact of their 'mirror neurons'. By watching selected students interact with me, other students can see a positive outcome of a student–teacher interaction. My modelling provides students with an effective behavioural pattern to follow (Sylwester, 2008). The students practise the strategy to gain familiarity with the words they might use and the emotions they might feel. In my experience, so often students who are determined to rebel from imposed authority or indifference are mirroring a teacher's demeanour. As Blakemore and Frith assert (2005, p. 163), 'the intentional use of non-imitation requires an understanding and knowledge of how to do it as much as simply be able to do it'.

- ▶ Why are *relationship skills* important in the classroom?

*Learning is a social activity so relationship skills are critical for dealing with the people we interact with in the classroom. Good relationship skills are the invisible glue which binds relationships together. When such skills are missing, it can lead to loneliness, frustration and non-cooperation. Positive relationships provide a gateway for learning.*

## People with high EI are fun to be with!! (Panju, 2008, pp. 52–53)

**People with high EI are fun to be with!!**

▶ They are able to:

1. Express their feelings clearly and directly
2. Read non-verbal communication
3. Balance their feelings with reason, logic and reality

▶ They feel:

1. Empowered
2. Motivated
3. Emotionally resilient

Slide 43

*People with high EI are able to:*

- *express their feelings clearly and directly*
- *read non-verbal communication*
- *balance their feelings with reason, logic and reality*

*They feel:*

- *empowered*
- *motivated*
- *emotionally resilient.*

## It is smart to avoid people with low EI!

**It is smart to avoid people with low EI...**

▶ Negative emotions, the bitterness bug, and victim viruses are all contagious

They:

1. Don't take responsibility for their feelings
2. Have little empathy for others

They can:

1. Attack, blame and command you
2. Interrupt, invalidate and intimidate you
3. Carry grudges and withhold information

Slide 44

*Negative emotions, the bitterness bug, and victim viruses are all contagious.*

*People with low EI:*

- *don't take responsibility for their feelings*
- *have little empathy for others.*

*They can:*

- *attack, blame and command you*
- *interrupt, invalidate and intimidate you*
- *carry grudges and withhold information*

Students were asked to describe scenarios where they had recognised people exhibiting high and low EI. Many girls could relate to the film *Mean Girls* (Michaels & Waters, 2004) where many characters displayed low EI. This led to a most interesting forum about the value of using Emotional Intelligence strategies in the classroom and how they might add to individual learning and also group learning. Students said feeling motivated, empowered and emotionally resilient was something to aspire to. They could see the benefits of managing their own emotions in class and trying to manage their peers' emotions to enable the whole class to focus on learning. Then, comments surfaced pertaining to teachers' management of their own emotions.

Students asked: 'Miss, are the teachers doing this too?' They indicated that some of their teachers had difficulty in managing their own emotions. They could recognise some low EI attributes in some of their teachers. As Tokuhama-Espinosa (2010, p.36) says: 'teachers do not have to like every student they come in to contact with, but they do have to respect them to the extent that they protect them from emotional harm.' Kovalik and Olsen (1998) assert that 'relationship' is the result of modelling and there must be absence of threat, real and perceived at the adult level if the classroom is to become the environment it must be to support powerful learning. Students felt teachers could benefit from learning about the strategies in EISIL. The students' acceptance of EISIL and their desire to use it were encouraging. Their words of wisdom regarding teacher professional learning were perceptive.

### **3.3 Conclusion**

Walberg, Zins and Weissberg in Zins et al. (2004) have called for further research to document the positive effects of SEL on student outcomes. They highlight the need for detailed descriptions of the features of SEL programs, how they are implemented and how they affect school outcomes. EISIL is an example of a SEL intervention. The literature review in Chapter 2 introduced the concept of scaffolding as a teaching and learning tool and Chapter 3 has described the development of emotional intelligence scaffolding: EISIL. This chapter has given a detailed description of EISIL and how it was implemented. The following chapter looks at the research methodology used to document the effects of EISIL on student Attitude, Effort and Performance as perceived by students and their teachers.

# **Chapter 4: Research Methodology and Positioning the Teacher–Researcher in the Study**

## **4.1 Introduction**

This chapter describes the methodological approach for this research and positions the teacher–researcher in the study. The first section presents the research framework and includes a discussion of the research context, the reasons for selecting a qualitative methodology, the rationale for selecting action research and the choice of content analysis.

The second section includes a discussion about the methodological context of the study and an overview of the participants. Details about the study design include sampling, data collection tools and methods, triangulating data sources, ethical considerations, data analysis procedures and data trustworthiness.

## **4.2 Research Framework**

### **4.2.1 Emotional Intelligence research context**

While Emotional Intelligence has been acknowledged as important to learning there is a lack of information that focuses upon students' and teachers' perceptions of how and why students' Attitude, Effort and Performance may improve when employing Emotional Intelligence strategies in their learning. I will use the teaching and learning scaffold described in the previous chapter — EISIL — to find an answer to the research question: *How do students and teachers perceive the influence of EISIL on student learning?*

### **4.2.2 Qualitative Research**

'Research more formally, may be defined as a process of systematic investigation leading to increased understanding of a phenomenon or issue of interest' (Stringer, 2008, p. 3). One must choose a research paradigm or methodological position to shape research and the

most appropriate way to determine if an intervention has any effect. Epistemology or 'how we know what we know' and Ontology or 'belief about the nature of reality' inform one's choice of methodology for a research study (Patton, 2008, p.134). Within the academic and professional world there are two major systems of enquiry or paradigms, which provide different ways to investigate phenomena or issues of interest. Quantitative research or scientific positivism uses controlled applications of experimental treatments or interventions and has provided a body of knowledge about the nature and operation of the physical environment and the human body. A *positivist* stance would reflect an epistemological view that the researcher and the researched are independent of each other, and an ontological view that there is one reality and 'natural laws can be developed from structured and careful *observations*' (Liamputtong, 2009 p. x). However, this approach is limited in its ability to explain human conduct (Stringer, 2008).

The epistemological question of what is the relationship of the knower to the known (or the knowable) or how can we be sure we know what we know, is reflected in the *constructivist* paradigm: humans have evolved the capacity to interpret and construct reality (Patton, 2001, p. 96). It is impossible to separate the inquirer from the inquired into — it is their interaction that creates the data that will emerge from the inquiry. The ontological question of 'what is there that can be known' is answered by advocates of the constructivist paradigm by stating that there are multiple realities and they are experiences that are 'interactive' in nature and vary in sophistication rather than one being 'truth' or 'truer' than another. Constructivist researchers connect the causal dots through the unfolding patterns that may emerge within and across stories and case studies (Patton, 2008, p. 421). Knowledge is therefore 'constructed' by the researcher and the researched.

Guba and Lincoln (1989, p. 70) state 'constructions' represent the efforts of people to *make sense* out of their situations — they are interpretations based primarily on experience. To

'see it with my own eyes' or to 'hear it with my own ears' is the best evidence that anyone can muster to demonstrate to oneself the validity of one's own 'constructions'. Although all 'constructions' are personally unique they are nevertheless extensively shared. Their constructivist or 'fourth generation' evaluation proposes that the central concern of evaluation is negotiation over, and construction of, the meanings of the value of what is being evaluated — involving the 'evaluator, the evaluated and the evaluated for' (Wadsworth, 2011).

We all have different realities and perceptions, and in qualitative research they are all valid, and collectively can give us a clearer understanding of what is happening. In this research each participant will have a different perceived experience. Thus, if what there is to be known only exists in connection with the inquiry process, then in this study, what is to be known will be created by the participants' interactions (including the researcher). Our 'knowledge' will emerge as a product of the interaction between participants in the research, and if 'knowledge' exists in the mode of human constructions then a methodological paradigm that features that premise will be the paradigm to choose — the constructivist paradigm. Qualitative, interpretive approaches to inquiry provide the principal means for enabling teachers to engage action research to devise teaching and learning strategies attuned to the realities of students' and teachers' lives (Stringer, 2008).

#### **4.2.3 Action Research**

Action research as a methodology is significant for educators because it is where the personal experiences of participants are valued. There is a comfortable connection where the researcher is also closely involved in the intervention. A key characteristic of action research in the educational context is the function of the researcher who plays a central role in both the teaching and the research process.

Action Research is a methodology of particular attraction to practising managers (French, 2011). French (2011, p. 5) refers to Sankaran and Tay (2003, p. 2) who explored the work of several writers (Abraham, 1994; Sankaran, 1999; Easterby-Smith et al., 2001; McNiff et al., 2001; Coughlan & Coughlan, 2002; Dick, 2002). They concluded that there are several reasons why Action Research is attractive to practising managers:

- It uses action as an integral part of research. It integrates thought and action.
- It is focused on the researcher's professional values rather than methodological considerations.
- It allows practitioners to research their own professional activities.
- It helps to improve practice at the workplace.
- It helps managers in their professional development by critically examining their own beliefs and practices.
- It helps managers to be multi-disciplinary and work across technical, cultural, and functional boundaries.
- It helps managers in implementing change effectively. Action Research is founded on research relationships in which those managers involved are participants in the change process. It pursues both change in the form of action and understanding through research.
- It is problem-focused, context-specific and future-oriented.
- It helps to develop a holistic understanding.
- It can use a variety of data collection methods that suit an organisation's environment (Sankaran & Tay, 2003, p. 2).

These reasons are all relevant to me in my role as a Learning and Support Teacher with responsibility for supporting teacher learning and professional development<sup>1</sup>.

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<sup>1</sup>**Note** re use of first person: I will use the first person as it is suitable for Action Research and to avoid ambiguity by differentiating my voice from those of the students and teachers (APA, 2010).

Baumfield, Hall and Wall (2013, p.161) emphasise the value of action research when they state 'Charting the move from a belief or "hunch" about an issue to collecting evidence and formulating an interpretation of the outcome is vital and it is the fact it is specific to a particular context that makes it so valuable.' They believe we need personal stories from the classroom because they can be the most persuasive. Similarly, Scott (1999, p. 165) stated that educators need to manage their own career-long professional learning by engaging in such valuable processes:

It is clear that, given the constantly changing context of daily practice in education, what educators currently know and can do now, no matter how effective, will not necessarily remain relevant. That is, their professional learning cannot be "one-off". Instead it must be career long. In facing this challenge, people in every occupation, including education and training, have to become adept at doing two things. First, at identifying which aspects of their present practice require change, and second, for the areas for improvement identified, at figuring out how to most efficiently and effectively go about addressing and monitoring their learning of them.

Scott (1999) also recommends the use of workplace action research as an effective form of professional learning to manage change in learning programs and workplace improvement in education. This recommendation further supports the choice of Action Research as my methodology for this study. The 'reflective practitioner' in action research needs the qualities of 'stance' of an effective educational leader as described by Scott (1999, p.154), including:

- a secure sense of self and having perspective
- being calm when things go wrong
- perseverance and willingness to take risks
- sensitivity to others
- willingness to collaborate.

These qualities of 'stance' were clearly mirrored in the EISIL intervention with the emotional intelligence competencies adapted for 14–15-year-old students. I had the support and opportunity to model these competencies to students and staff as a teacher and as an educational leader managing my own professional learning. Leading by example is a key ingredient in effective management of change:

Such ongoing professional learning requires continuous upgrading for both practitioners' expertise in their specific professional area and their skills as a leader, manager and teacher. It requires a stance, a way of thinking and organisational milieu which support their engagement in relevant and efficient self managed professional learning. That is, they must be capable not only at leading change with others but at managing their own personal ongoing professional change (learning) (Scott, 1999, p. 165).

The intervention Emotional Intelligence Scaffolding to Improve Learning (EISIL) was designed from existing neuroscience and emotional learning resources by a Learning and Support Teacher seeking to improve her professional practice and to help other teachers to understand how they can better teach their students by using Emotional Intelligence in their classrooms. The selection of a qualitative research framework using action research methodology was an appropriate choice for a number of reasons, including the educational context, the need for a methodology that locates the teacher within the study and the teacher–researcher's unique position to identify the participants' perceptions of the EISIL intervention. In addition, enhancement of the teacher–researcher's professional practice and the opportunity to add to the body of information on EI and classroom learning for other teachers, were strong motivating forces.

My choice of methodology was appropriate to my situation where action and research are intended outcomes. As French (2011, p. 5) suggests 'if there is a desire to make a new contribution to knowledge (as is the case with a doctoral study) and the research project is

conceived as a piece of practitioner research, then Sankaran and Tay's (2003) analysis provides supporting justification for action research as the methodology of choice'. The methodology provides flexibility and responsiveness that are needed for effective change at the same time as providing a check on the adequacy of the data and conclusions (Dick, 1997). Through the process of focusing on the reality of what is actually happening in the teaching–learning process, resulting in the critical self-reflection that is part of action research, the study outcomes can potentially provide data for improved educational practice (Denzin & Lincoln, 2005; Mills, 2003). In order to assess whether my data had any potential for improved educational practice I wanted to see if there were any commonalities in participants responses, or indications that there were problems with the data-collection instruments or the intervention. Therefore I carried out some simple 'quantitative' analysis to try to identify any commonalities, as a way of adding to the richness of the individual responses and perceptions of the value of the intervention.

#### **4.2.4 Positioning the Teacher–Researcher in the study**

Herr and Anderson (2005) state that action research demands some form of intervention. For the action researcher these interventions constitute a spiral of action cycles in which one undertakes the following steps:

1. developing a *plan* of action to improve what is already happening
2. *acting* to implement the plan
3. *observing* the effects of action in the context in which it occurs
4. *reflecting* on these effects as a basis for further planning, subsequent action and on through a succession of cycles (Kemmis, 1982, p. 7).

This cycle of activities forms an action research spiral in which each cycle increases the researcher's knowledge of the original question, puzzle, or problem and helps facilitate a possible solution (Kemmis, 1982, pp. 4–5).

As the researcher, I am very much an 'insider' in this project and therefore empathise with Herr and Anderson's (2005, p. xvii) statement: 'Unlike traditional dissertations that insist on a dispassionate, distanced attitude to one's research, action research is often chosen by doctoral students because they are passionate about their topic, their setting and co-participants.' As such, I am passionate about my topic, my school and my staff and students. However, it is very important as a researcher to not be over biased in terms of the research. Thus, I sought the input and responses from other teachers and the students involved in the intervention.

Mills (2011) claims that all action researchers, regardless of their particular school of thought or theoretical position, are committed to a critical examination of classroom teaching principles and the effects teachers' actions have on the children in their care. He also describes action research as persuasive, authoritative and relevant. It allows teachers access to research findings and challenges the intractability of reform of the educational system.

Teachers listen to other teachers. Teacher talk is also a powerful professional learning tool and change agent. In my experience when teachers share a great resource, ask another colleague into their classroom, or model an innovation, a change in practice often occurs. To effect wider change teachers need to be good researchers and communicators to share their successful innovations with the authority of academic acceptability. The choice of Action Research as my methodology will assist potential stimulation of effective change to practice.

'Action' and the data collection techniques and data analysis used, will be appropriate to assure fidelity in reflection of teacher and student views, viz., 'research'.

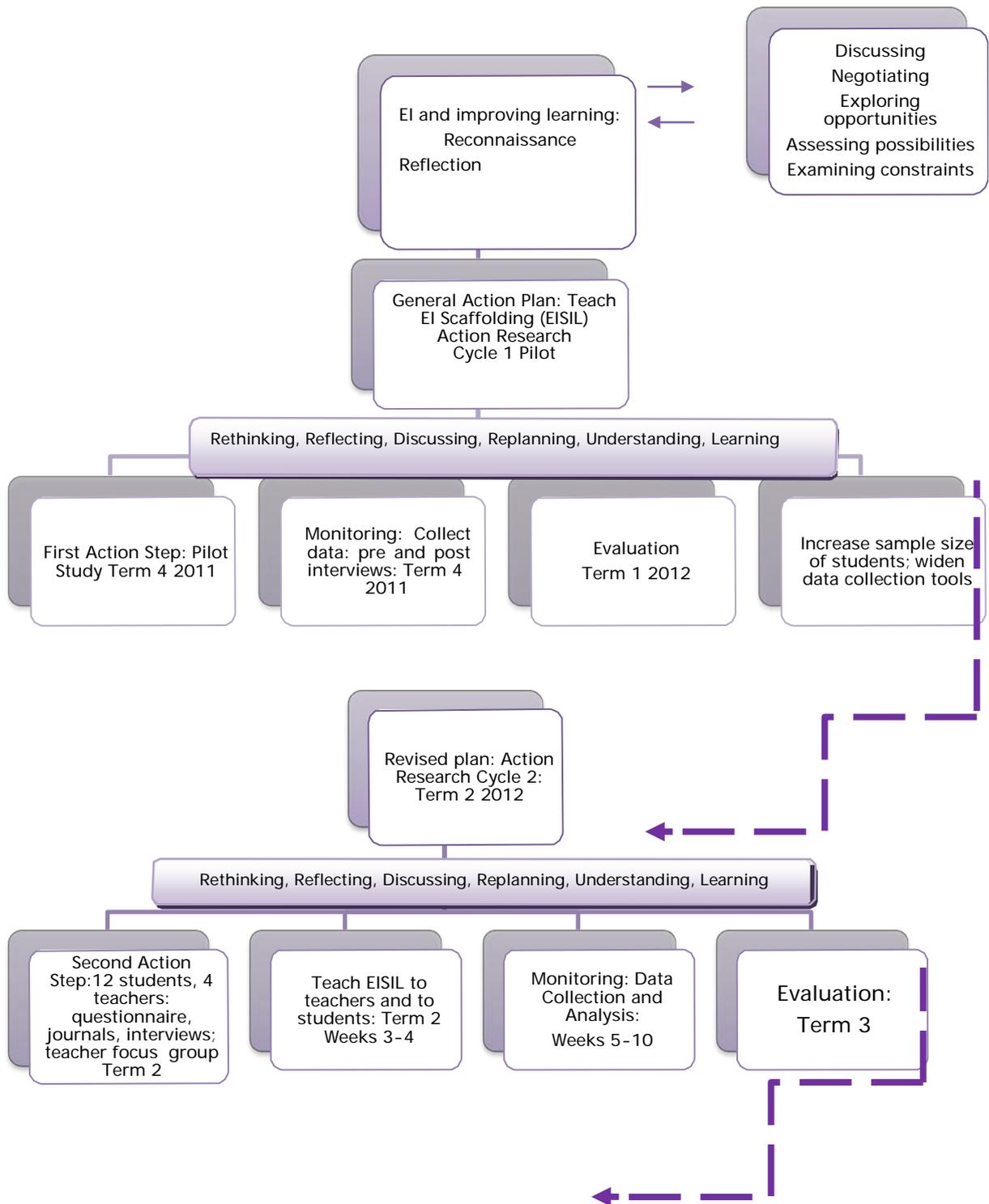
Further exploration of definitions of Action Research consolidated my choice of research methodology. Argyris and Schön (1991) describe the goals and methods of the action research tradition: action research takes its cues — its questions, puzzles, and problems — from within particular, local practice contexts. It builds descriptions and theories within the practice context itself, and tests them there through *intervention experiments* (Herr<sup>93</sup> & Anderson, 2005). I wanted to explore my practice in my school using an intervention.

Action research places more emphasis on the 'how to' approach and generally has fewer structured rules than other methodologies. It assumes, to some degree, that individual teachers or teams of teachers are autonomous and can determine the nature of the investigation to be undertaken. It also assumes that teacher-researchers are committed to continuing professional development and school improvement and that teacher-researchers want to systematically reflect on their practices. Finally, the practical action research perspective assumes that as decision makers, teacher-researchers will choose their own area of focus, determine the data collection techniques, analyse, interpret the data and develop action plans based on their findings (Mills, 2011). All these criteria underpinned my action research plan.

#### **4.2.5 Research Study Design: My Action Research story**

My practical action research followed Kemmis's (1998) representation of Lewin's Action Research 'spiralling' cyclical process (cited in Mills, 2011, p.15) that includes: reconnaissance, planning, first action step, monitoring, reflecting, rethinking, and evaluation; second action step, monitoring, reflecting, rethinking, and evaluation; and so on in a repeating sequence. It was also informed by Mills' Action Research Plan guidelines (2011, p.60).

Figure 1 illustrates my Action Research plan and an account of its implementation follows.



**Figure 1: Action Research Cycle of EISIL**  
 (after Lewin & Kemmis, 1988, cited in Mills, 2011, p.15)

Reconnaissance involves:

1. clarifying an Area of Focus
2. selecting an Area of Focus

3. gaining insight through self-reflection:

- Why am I bothering to do this research? And, why am I doing it this way?
- What are the theories that impact on my practice?
- What are the educational values that I hold?
- What is the historical context of how I arrived at my beliefs about teaching and learning?

4. describing and explaining the situation targeted for research

5. discussing, negotiating, exploring opportunities, assessing possibilities and examining the constraints of an Action Research study.

#### **4.2.5 (i) Clarifying an Area of Focus**

Clarification through the use of Statement and Observation: Some students' learning is affected by the way they manage their emotions and the emotions of others in the classroom.

Question: Could students' learning be improved by understanding the role of emotions in learning and using emotional intelligence strategies?

#### **4.2.5 (ii) Selecting an Area of Focus**

My area of interest particularly focussed on an issue that involves teaching and learning, and that was directly under my locus of control and responsibility. It was one that I was passionate about, and also an area where I wanted to see change and improvement. I decided to investigate the use of an intervention (EISIL) which is designed to teach students EI strategies to improve their learning (as indicated by students' and teachers' perceptions of changes in Attitude, Effort and Performance). In my study the changes or variables are the inclusion of an EI 'curriculum' as a teaching and learning intervention and any resultant student learning behaviours and outcomes.

#### **4.2.5 (iii) Gaining insight through self-reflection**

This reflection can be found in Section 1.1, 1.2 and 1.3 in Chapter 1.

#### **4.2.5 (iv) Description and Explanation**

Description and Explanation can be found in Section 1.1, 1.2 and 1.3 in Chapter 1.

#### **4.2.5 (v) Discussing and Negotiating**

My proposal for research within the school was supported by the school executive which comprised the Principal, Deputy Principal and Head Teachers of English and History, Mathematics, Science, and Secondary Studies. The Principal was very keen for students who were not in my research group to have the opportunity for exposure to the proposed intervention in the longer term. This support gave me great confidence to design an intervention and take on an action research project that documented and critiqued the program. The opportunity to engage students in a program designed to improve learning was welcomed by teachers and discussion around an appropriate target group ensued.

Year 7 was not considered suitable as this is the first year of high school. It is important for 'settling in' and the secondary teachers have not yet assessed students' ability levels. A withdrawal program in Year 8 — a behaviour modification intervention — was already being introduced for a number of students. Year 10 was not considered suitable to target in their 'higher stake' School Certificate year. Thus Year 9 was selected as the year group for the pilot study. It had formally identified able (labelled '9x') and less able ('non 9x') groups of students within one class.

As I am a Learning and Support Teacher (LaST) I do not have my own class. Typically I work in class with particular students or groups of students or on a withdrawal basis. Access to students was an important consideration as they are not 'my' classes— I needed to

'borrow' the students for research purposes. However since I had two 'special needs' students in the Year 9 class, then access was not a problem.

### **4.3 General Action Research Plan: Teach Emotional Intelligence Scaffolding to Improve Learning (EISIL)**

#### **4.3.1 Action Research Phase: Preparing and delivering the EISIL lessons**

The majority of teachers today have not partaken in extensive learning in their university education or teacher professional learning about the role of the emotions in learning. This is not surprising given that the concept of Emotional Intelligence is relatively new in the spheres of education thinking and practice. In spite of this lack of exposure, some have addressed EI within their educational practices as part of their successful individual approach to teaching. On the other hand, as Panju (2008, p. 3) observes: 'some teachers have used techniques that are contrary to EI ideas, for example, providing negative feedback to pupils, using sarcasm, or not modelling effective anger management techniques themselves.' Panju (2008, p. 2) also says:

With the recent advancements in neuroscience we know that the emotional centres of the brain are intricately interwoven with the neo-cortical areas involved in cognitive learning...teachers need to develop an understanding of what Emotional Intelligence actually stands for, how it can be developed and how it can be used effectively in their classrooms.

This statement raises the question of whether EI strategies can be used to enhance learning in the classroom. EISIL was designed to promote learning in the classroom, in an Australian high school, and this study was designed to explore students' and teachers' perceptions of its effects in terms of changes in student learning.

### **4.3.2 Defining improved 'learning' at Plateau High: Attitude, Effort and Performance**

From a neuroscientific perspective, neuroscientists would judge learning by the excitability of groups of brain cells. If we could see students using EISIL in fMRI we should see excitability of the students' brain cells and 'learning appropriate responses' from the limbic system. Howard-Jones (2011b) asserts there is a need for a new field of inquiry that is both scientifically and educationally grounded when he states:

Psychological understanding of learning will be crucial in linking neural processes to learning achieved in a classroom. Educational thinking also needs to be involved at every stage, from developing tractable and useful questions, to executing the research and communicating its findings. Innovation will be required in developing the methodology to embrace both natural and social science perspectives in this way.

Research by Pickering and Howard-Jones (2007, p. 113), on educators' views of the role of neuroscience in education, recommended researchers should 'spend more time in schools before beginning neuroscience research projects with educational aims, developing hybrid professionals trained in both neuroscience and education to act as translators between the two fields ...'.

Educators judge learning by an accumulation of knowledge, skills and/or levels of engagement (Dommett et al., p. 36). At Plateau High Effort, Attitude and Performance are the commonly agreed indicators of learning thus this structure was deemed suitable for the study. The use of the scaffold as a tool for improving learning was examined through changes in Attitude, Effort and Performance as viewed from the students' and teachers' perspectives.

### **4.3.3 Construct Validity**

In a small qualitative study investigation of the construct validity of the data-gathering tools (e.g., the questionnaire) is not appropriate. However, researchers need some sort of

indication of the trustworthiness of these tools and therefore a type of construct validity is often investigated. The demonstration of construct validity involves a gradual accumulation of information from a variety of sources (Minichiello, Sullivan, Greenwood & Axford, 2004, p. 341). Data were collected from a variety of sources in a similar way to Brackett, Rivers, Reyes and Salovey (2012) who tested the impact of a SEL curriculum, on academic performance and social and emotional competence. Academic performance was assessed by report card grades and social and emotional competence was assessed with teacher reports of student behaviour. This information was combined with my use of teacher 'confidentials', teacher interviews and a teacher focus group. Adding student data to my study strengthened my methods in comparison to their study. Blackwell, Trzesniewski and Dweck's (2007) research reported student accounts of their changed attitude to learning and increased commitment and effort in their academic work after exposure to a SEL curriculum. Their finding supported my choice of using Attitude and Effort as indicators of improved learning.

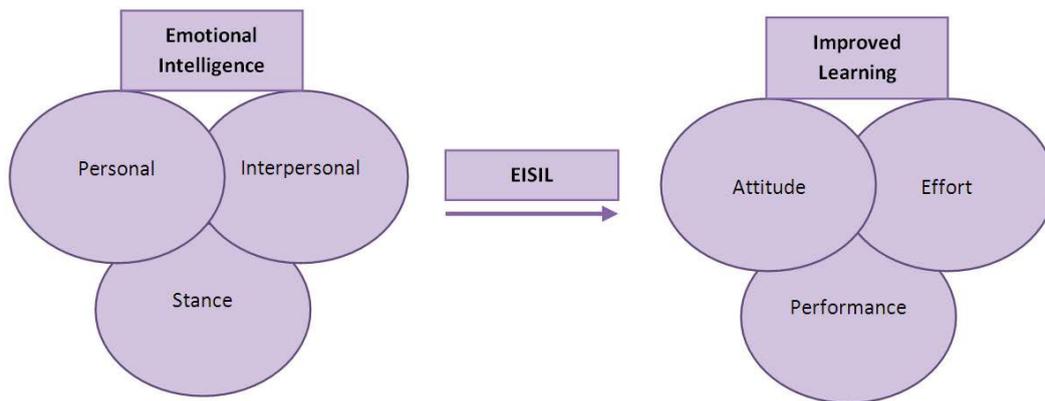
Demonstrating construct validity is not a simple matter and cannot be done in a single study. Evidence about the validity of a data collection tool to test a construct needs to be built up over time with different types of information in different settings (Minichiello, Sullivan, Greenwood & Axford, 2004). As no appropriate questionnaires existed, I designed questionnaires for this small sample by careful analysis of the literature (Foddy, 1993). The study's questionnaires contribute to the development of data collection tools to ascertain the perceptions of students and teachers about the importance of learning about emotions to improve student outcomes.

#### **4.4 A Conceptual Framework for EISIL**

Can improving students' Emotional Intelligence competencies enhance student learning?

The following conceptual framework (Figure 2) is based on the work of Scott and Wilson (2002) and has been modified and adapted for this study of 14–15-year-old students in a

school classroom situation within a small rural context. It shows how the combined EI competencies of personal emotional intelligence and interpersonal emotional intelligence underpin a student's EI stance. The aim of investigating a link between this EI stance and improved learning outcomes is illustrated in the diagram.



**Figure 2: Conceptual framework for the study (after Scott & Wilson, 2002)**

This framework was used to explore the following Emotional Intelligence competencies: personal emotional intelligence and interpersonal emotional intelligence that underpin a student's *Emotional Intelligence Stance*, within a classroom learning context. Scott and Wilson's (2002) research on EI in successful graduate students can be reflected in the attributes of successful classroom learners.

Goleman's (1996) Emotional Intelligence competencies in classroom learners that provided a lens for this study were:

*Self-awareness* in the classroom

- understanding personal moods and emotions
- recognising how personal efforts affect others

*Self-regulation*

- control of disruptive impulses and moods

*Motivation*

- a passion for learning
- energy and persistence to learn

#### *Empathy*

- understanding the emotions of others

#### *Relationship Skills*

- working effectively with others to achieve learning outcomes

Indicators of *personal* emotional intelligence for the purposes of this study include the following foci in the classroom context:

- willingness to try new things
- ability to admit and learn from errors
- ability to withstand personal attacks
- ability to remain calm when things go wrong
- retaining focus on work under pressure, and
- feeling centred, grounded or 'mindful'.

Indicators of *interpersonal* emotional intelligence within the classroom context include:

- willingness to listen to different points of view
- finding solutions to manage their emotions and the emotions of others
- patience
- ability to work with others
- willingness to allow others room to do things
- influencing others to achieve learning outcomes.

*Emotional Intelligence Stance* as a component of Emotional Intelligence within the classroom context involves a sense of self that includes beliefs, thoughts, feelings (and experience), strengths and weaknesses, and ways of doing things. Emotional experiences

within the classroom can be intense and generate powerful feelings about situations. Scott and Wilson (2002) propose that as a result of understanding Emotional Intelligence, students can generate a diagnostic map, a way of giving meaning to complex and difficult-to-understand factors within a classroom learning context. From Scott and Wilson's work (2002) these maps would seem to be generated by:

- experiencing the recurring challenges of learning in a classroom context
- reflecting on these challenges
- testing and refining what has been learnt in other lessons
- focusing teachers' and students' attention on these challenges in the learning process.

A diagnostic map provides a framework for students to discover greater meaning in the emotions that are generated within the classroom learning environment and to explore more deeply their own EI competencies. It could be said that all of these EI characteristics are required in every student. They are core competencies that every teacher wants to see in a student. The experience of an intervention to introduce students to Emotional Intelligence and the role of the emotions in learning could be seen as the first step in assisting students (and teachers) to develop a diagnostic map for improved classroom learning.

## **4.5 The Intervention**

As described in the previous chapter, the intervention necessitated further research and the development of a series of lessons that aimed to increase student knowledge of the attributes of EI and the skills required in using EI strategies in their learning. The literature review assisted me to develop an emotional learning program that included the ways in which the brain learns and also reassured me that Goleman's list of EI competencies were the skills that students needed to understand and master. I felt that the PowerPoint presentation developed to guide the delivery of the intervention lessons could also be useful

in the future for Teacher Professional Learning (TPL) and for teacher use in other classes.

An EISIL Reminder Card was given to students and teachers after the EISIL lessons were delivered, for use as a prompt in class or as a tool for reflection (see Appendix B). The EISIL Reminder Card would also be the framework for reporting results of the intervention and coding of themes arising from the findings. Changes in Attitude, Effort and Performance as viewed from the students' and teachers' perspectives would then be used to estimate the value of the scaffold as a tool for improving learning.

## **4.6 Action Research Cycle 1: Pilot Study**

### **4.6.1 Sampling (*Membership of the Action Research Group Cycle 1*)**

#### **4.6.1 (i) Students**

Two boys and two girls, one of each identified as a high achiever and one of each identified as a lower achiever, were selected to participate. Gender balance was achieved. The students were selected alphabetically, starting at A and selecting the first four appropriate students.

#### **4.6.1 (ii) Teachers**

The four teachers selected were the students' 'core subject' teachers (English, Maths, Science and History) to ensure consistency across subject areas (i.e., no 'elective' subjects were included). A balance of gender and level of experience was also achieved. The sample size ensured the delivery of the intervention could be achieved within the constraints of the school timetable. Devotion of student and teacher time to any journal entries, interviews and report writing were given due acknowledgement and consideration.

## **4.6.2 Statement of Resources**

### **4.6.2 (i) Human Resources**

Teacher and student involvement was on the basis of goodwill.

### **4.6.2 (ii) Physical Resources**

The timetabling of the rooms to deliver the EISIL needed to be planned as students were withdrawn from class for EISIL lessons. Most 'free' classrooms had Interactive whiteboards (IWBs) installed to enable viewing of the PowerPoint presentation.

## **4.6.3 Ethical Considerations**

Principal and Executive support was negotiated, UNE Ethics approval was granted (HE11/148), and approval from the State Education Research Approval Process (SERAP) (2011166) was also granted. Principal, teacher, student (young person) and parent/carer information sheets were distributed and permission forms were returned. (Copies of information sheets and consent forms can be found in Appendices C, D, E and F.

## **4.6.4 Timeline**

- Step 1** Initial approval and support from the Principal was obtained.
- Step 2** Identification of student and teacher participants
- Step 3** Ethics Approval/Confirmation
- Step 4** SERAP Approval
- Step 5** Information letter to Principal and signed consent
- Step 6** Participant letter/signed consent, Parent/Carer and Young Persons' letters/signed consent
- Step 7** Teacher Professional Learning Session — EISIL PowerPoint
- Step 8** Teacher completion of 'Student Report'
- Step 9** Pre-Intervention interviews

**Step 10** Implementation of EISIL

**Step 11** Journal entries by students and teachers (for use as a memory jogger rather than for 'handing in')

**Step 12** Teacher completion of 'Student Report'

**Step 13** Post-Intervention interviews

**Step 14** Study Visit to Ulm Transfer Centre for Neuroscience and Learning, Ulm, Germany, and Max Planck Institute for Human Development, Berlin

**Step 15** Reflection on Pilot

#### **4.6.5 Data collection Tools (*Monitoring*)**

##### **4.6.5 (i) Journal entries**

Students were asked to use a small notebook to jot down their responses to the delivery of the EISIL sessions and their usage of the EISIL in learning situations. These notebooks were not for collection. It was suggested to teachers that they keep a journal to record any identified changes/responses to student learning behaviours during and after the delivery of the EISIL intervention and specifically any evidence of students' usage of aspects of the EISIL in learning situations. They were asked to use such data to complete a 'student report'.

Journaling is a data collection tool and a means to reflect on practice for teachers. Teachers can record observation data and begin to make explicit interpretations of the data (Sumara & Carson, 1997). In my supervision experience, early career teachers have often journaled as a requirement of course completion (Sumara & Carson, 1997, p. 77) and feel comfortable with this practice whereas more experienced teachers often choose dialogue with colleagues as a preferred technique for reflection. Both methods of reflection were encouraged and any journal entries were gratefully received. My own journal entries not only kept track of my observations but also my feelings associated with the action research process. They enabled me to systematically reflect on my practice 'by constructing a narrative that honours

the unique and powerful voice of...teachers' (Mills, 2011, p. 86).

Journaling is often perceived by students as tiresome (Sumara & Carson, 1997, p. 93) so students were encouraged to 'mind map' their experience of each of the dimensions of EI scaffolding each lesson and to use their journal to record any use of the scaffolding in the same manner. All students appear to come from primary school with 'mind mapping' skills which are an excellent cognitive scaffolding tool.

#### **4.6.5 (ii) Student Reports**

- Comparative analysis of student reports pre- and post-implementation

The 'Confidential' at Plateau High is a standard, school-developed report solicited by Head Teachers and Year Advisors, requested at any time throughout the year, to ascertain the progress of student learning. Classroom teachers are asked to comment on three areas of student progress: Attitude, Effort and Performance. A Pre-Intervention 'Confidential' and a Post-Intervention 'Confidential' were compared to scope any perceived change in student learning after the student's exposure to the EISIL. (A template of a 'Confidential' can be found in Appendix G.)

- Indicators of Learning at Plateau High: Attitude, Effort, and Performance

Attitude, Effort and Performance have been chosen as the indicators of learning as assessed by the teachers. The teachers have used these criteria in past 'Confidentials'. Their evidence of Attitude, Effort and Performance could include level of engagement in class discussion, on-task time, 'results' on assignments and tests, response to questions, asking questions, assisting other students with cognitive tasks, listening to the teacher and/or to other students.

#### **4.6.5 (iii) Recorded interviews for transcription prior to and after the intervention**

Demarrais (2004, cited in Merriam, 2009, pp. 87–88) defines an interview as a 'process in which a researcher and participant engage in a conversation focused on questions related to a research study...The main purpose of an interview is to elicit a special kind of information.' By using interviews, the researcher can reach areas of reality that would otherwise remain inaccessible such as people's subjective experiences and attitudes (Perakyla, 2005, p. 869). Merriam (2009, p. 88) refers to Patton (2002) who describes the researcher as one who seeks to find out what is 'in and on someone else's mind'.

A semi-structured interview arrangement was used. Merriam (2009) describes this type of interview as follows:

- the interview guide includes a mix of more and less structured interview questions
- all questions are used flexibly
- specific data are required from all respondents
- the largest part of the interview is guided by a list of questions or issues to be explored
- there is not a predetermined wording or order.

On this last point there might be a preferred order, but it is certainly not unalterable. This format allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and to new ideas on the topic.

As the researcher, I planned to be part of the interaction in the study: '...we have reached the point of the interview as negotiated text...researchers are not invisible neutral entities; rather, they are part of the interaction they seek to study, and they influence that interaction' (Fontana & Frey, 2005, p. 716).

Students participated in semi-structured interviews regarding their feelings and learning performance in the classroom. Teachers participated in semi-structured interviews regarding students' learning behaviours and performance.

#### **4.7 Evaluation of the Pilot Study**

The pilot study indicated that the intervention was appropriate for students in the same classroom with different Emotional Intelligence needs (see Chapter 5). This result warranted further research with a larger sample and its accompanying diversity. Year 9 had proved to be a suitable year for delivery in terms of student accessibility of the content and ability to respond to it. Year 9 in 2012 would also include Indigenous students and a student with a disability. At the end of the first Action Research Cycle (Pilot Study) there was an opportunity for *rethinking, reflecting, discussing, replanning, understanding and learning* before I embarked on another Action Research Cycle.

##### **4.7.1 Data Collection Tools**

French (2009, p. 197) refers to Grundy and Kemmis (1981, p. 330) who suggest that it is during the reflective moment of the Action Research cycle that data analysis occurs:

The reflective stage has the purpose of providing the practitioner with important insights with which to move the [action research] process forward. The practitioner is the sole arbiter of the interpretation. These insights are elicited through discussion or through the deliberation of the participants. The term 'triangulation' has been appropriated to refer to the cross referencing of a number of participants' perceptions of an event. Triangulation makes possible the sharing of authentic insight and thus is an important process of enlightenment.

Minichiello, Sullivan, Greenwood and Axford (2004) note that a common thread in action

research is the use of conceptual triangulation of data where one can use different data collection methods derived from different methodological criteria to answer different types of questions. They also observe that conceptual validity means we can use these different methods, for example, surveys and interviews, to explore an issue and link the answers conceptually together. The use of pre- and post-implementation interviews and student reports were satisfactory tools in this small sample to ascertain student and teacher accord on changes in a student's Attitude, Effort and Performance after experiencing EISIL.

However, I felt I needed more tools to describe the students' recognition of Emotional Intelligence competencies and how they reflected these understandings when using the Emotional Intelligence strategies in their learning. The first Action Research cycle suggested that students needed more concrete examples of EI 'competencies' than the interview questions proposed. 'Confidentials' and the pre-implementation interviews of teachers revealed similar responses. Thus, in the next AR cycle, a pre-intervention questionnaire would give students and teachers more concrete examples of EI 'competencies'. I felt post-intervention interviews would reveal the magnitude of the 'take-up' of EISIL terminology and strategies without the prompting that would be afforded by another questionnaire. 'Confidentials' would continue to offer an excellent description of student learning.

Therefore, I reflected on my data collection techniques, and with the flexibility of an action research project, I thought to build on the 'synergy and strength that exists between quantitative and qualitative research methods to understand a phenomenon more fully than is possible using either method alone' (Mills, 2011, pp. 4–5). I did like the idea of using the quantitative technique of 'Attitude Scales' that allow teacher researchers to determine beliefs, perceptions and feelings (Mills, 2011, p. 91). However, I felt the participants would not have enough knowledge about EI to be able to 'just circle a number' on a scale. Students were unlikely to have the vocabulary (yet) to name emotions, nor have ever been asked to think

about them 'cognitively'. In addition, I was not attempting to 'measure' changes in students' EI.

Thus, rather than using numbers I used descriptors to create questionnaires for students and staff to indicate their perceptions of students' EI competencies and that would assist them to become familiar with the vocabulary of EI (drawn from the literature). Students were asked to rate their EI competencies on a scale: Not typical at all of me; Not very typical of me; Somewhat typical of me; Fairly typical of me; Very much typical of me. There were two questions relating to *self-awareness*, two questions relating to *self-regulation (control)*, four relating to *empathy* and three relating to *relationship skills*. Teachers were asked to circle the most appropriate descriptor from a list of options that could indicate students' EI competencies in their classroom. From the student and teacher responses I made an on- balance description of their perceived EI competencies using three descriptors for each competency:

- Self-Awareness: some self-awareness, self-aware or very self-aware
- Self-Regulation: limited self-control, having self-control or strong self-control
- Motivation: need for teacher direction, need motivation or self-directed
- Empathy: limited empathy, empathetic or very empathetic
- Relationship Skills: selective, dependent or gregarious (with other students)
- Relationship Skills: confident, comfortable or mature relationship (with teacher)

This technique seemed congruent with my study of teacher and student views and would complement my other data-gathering instruments to ensure my research questions were answered and new knowledge was created about the contribution of Emotional Intelligence strategies to improved student learning. The student and teacher questionnaires were informed by Davidson and Begley (2012, pp.43–65) from the section 'Assessing Your Emotional Style'. (Student and Teacher questionnaires can be viewed in Appendices J and K.)

During Action Research Cycle 1 I had the opportunity to observe students using the EI scaffold strategies in classes I was supporting. In Action Research Cycle 2 I would use the power of journal entries to record these observations for my research.

I also felt that the collection of any journal entries from students and staff would be of value. I believed the addition of a teacher focus group at the end of the cycle would assist in developing shared understandings and in identifying the effectiveness or weaknesses of the EI scaffolding in learning.

#### **4.7.2 Data Analysis**

I chose directed content analysis to systematically categorise my text data to find evidence to answer my research questions. Hsieh and Shannon (2005) define qualitative content analysis as 'a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns' (p. 1281).

One form of content analysis, directed content analysis, involves coding text with predetermined codes, where categories are developed prior to searching for them in the data (Minichiello et al., 2004). Existing EI and learning research helped focus my research question and provided predictions about the 'variables of interest' (Hsieh & Shannon, 2005, p. 1281) that could be used as codes (EI competencies, EISIL strategies and Attitude, Effort and Performance). I believed coding using the EISIL scaffold would not bias the identification of relevant text and could be trustworthy (Hsieh & Shannon, 2005, p. 1282). Concern over contextual variation in the meaning of words was minimal (Geisler, 2004, p. xviii) as the intervention was designed to teach EISIL terminology. I also collected a variety of text data for content analysis including narrative responses, observations, teacher reports ('confidentials'), interview and focus group transcripts, and emails. I collected data from four

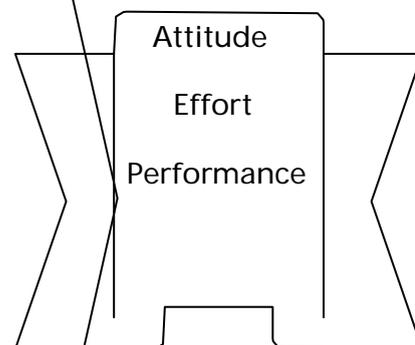
teachers and 12 students across four different subject areas in six different formats in verbal, print and electronic form. Triangulation of these varied data assisted in making my analysis robust.

The main strength of a directed approach to content analysis is that existing theory can be supported and extended. The directed approach does present challenges in that researchers may approach the data with an informed but, nonetheless, strong bias. Researchers might be more likely to find evidence that is supportive rather than non-supportive of a theory. To address this concern I presented evidence by showing codes with exemplars and by offering descriptive evidence (Hsieh & Shannon, 2005, p. 1283). Content analysis offered me a flexible and pragmatic method for developing and extending knowledge of EI and learning. Table 1 shows the inter-relationships of the pre-determined categories of EI competencies, EISIL strategies and Indicators of Learning (Attitude, Effort, Performance). This table builds upon the conceptual framework of the thesis shown in Figure 2.

**Table 1: Content Analysis Codes Summary Table: EI Competencies, EISIL strategies and Indicators of Learning: Attitude, Effort, Performance<sup>2</sup>**

<b>EI Competencies</b>	<b>EISIL strategies</b>
<i>Self-Awareness</i>	<b>Recognising Our Emotions</b> Brain Bits & Brain Plasticity
<i>Self-Regulation</i> ( <i>Self-Control</i> )	<b>Managing Our Emotions</b> Emotional Hijacking Delaying Gratification Anger Management
<i>Motivation</i>	<b>Resilience and Optimism</b> 'Me' Diagram Flow Mindfulness
<i>Empathy</i>	<b>Recognising Others' Emotions</b> Magazine activity
<i>Relationship Skills</i>	<b>Managing Others' Emotions</b> Role playing: 'You sound very upset' 'I can see you are really uncomfortable with this' 'I can see you are very busy right now' Sir...

Improved Learning



<sup>2</sup>Note re Formatting Style: When referring to the above categories *italics* are used when referring to EI competencies, capital letters for Attitude, Effort and Performance and capitals for EISIL terms such as Managing Own Emotions.

## **4.8 Action Research Cycle 2: Revised Plan**

As a result of rethinking, reflecting, discussing, replanning, understanding and learning from Action Research Cycle 1, I increased the number of participants in Action Research Cycle 2 to 12 Year 9 students and their English, Mathematics, Science and History teachers (i.e., 4 teachers). I also widened the data collection tools. However, this study is a small scale exploratory study, in one small school with one year group of students. The validation of data-gathering instruments cannot be carried out with such a small sample. In this exploratory study I am 'testing' the instruments to see if they are worth using in a larger study which might yield empirical evidence.

### **4.8.1 Sampling**

Year 9 was again selected as the year group for the study. Access to students was an important practical consideration as they were not 'my' classes. As stated previously, I was 'borrowing' the students for research purposes. I had access to the Year 9 class that included one 'special needs' student. Year 7 was not considered appropriate as this year is important for 'settling in' and I was also a Co-Year Advisor (thus my knowledge of students' welfare issues in this role might have had an impact on the research). In Year 8 the LaST did not have access to one class and there was a significant behavioural concern in the other class that would prevent use of this class for research purposes, at that stage. Access to Year 10 was not considered suitable during their School Certificate year. As well, I considered it an advantage to use the same year as in the pilot study. The teacher participants were the students' teachers of core subjects, i.e., subjects all students must do: English, Mathematics, Science and History.

#### **4.8.1 (i) Students**

Twelve students were selected from the class roll. An Indigenous boy, an Indigenous girl and a boy with a physical disability were included in the group. Gender balance was also achieved.

#### **4.8.1 (ii) Teachers**

To ensure consistency four core subject teachers were selected. A balance of gender and level of experience was also achieved. The sample size ensured the delivery of the intervention could be achieved within the constraints of the school timetable. Devotion of student and teacher time to any journal entries, interviews and report writing was given due acknowledgement and consideration.

#### **4.8.2 Statement of Resources**

Human and Physical resources remained the same as for Action Research Cycle 1 with the addition of a Teacher Professional Learning (TPL) Session for the two teachers who were new in Action Research Cycle 2. Some professional reading and a one-hour TPL session using the EISIL were provided for the new teacher participants. This support was designed to enhance teacher awareness of the role of the emotions in learning, to assist them to recognise Emotional Intelligence competencies and to recognise the use of the EISIL by students in their lessons.

I knew there was a significant level of support for the delivery of the EISIL intervention from the Principal, Executive, and staff within the school, as well as from the State Education Research Approval Process (SERAP). Ultimately, the Principal wanted to see both Year 9 classes experience the intervention. Teachers and the school executive were supportive of students' withdrawal from class to experience the EISIL intervention. Lessons from English, Mathematics, Science, and History were used to deliver the EISIL. Students were withdrawn from half a lesson for each of the interviews.

#### **4.8.3 Ethical Considerations**

I needed to consider confidentiality, mandatory reporting and informed consent. These issues were addressed in UNE Ethics Permission approval No: HE11/148 (see Appendix H)

and DEC State Education Research Approval Process SERAP approval No: 201116699 (see Appendix I).The following issues were addressed in the implementation of this research project:

- An audit trail was kept for data safekeeping and to show how the data were analysed.
- Confidentiality was assured by password protection.
- The topic, along with how, when and where the information would be used, was shared with participants.
- Participants were told they would be asked questions which would enable them to express their views.
- The interviews were recorded. A copy could be given to each participant if desired. The information will be kept for 5 years for research purposes and then destroyed.
- Participants are not named or identified but are identified by pseudonyms.
- The Learning Support Team leader (Deputy Principal) was apprised of the research project and was willing to act as point of contact for students, teachers and parents regarding any possible issues of concern, including power issues among participants (researcher, students, teachers); teacher relationship issues among participants; and possible concerns about continued participation in the project.

Participation was voluntary and a participant could opt out at any time. The Information letters to all participants included strategies for participants to follow if they felt uncomfortable at any time and wished to opt out of the study. (See Appendices C, D, E and F.)

I ensured that students, staff and parents had access to drafts of the write-up so that they could see how the reports were presented, quoted, and interpreted. I made a mental note to listen carefully for any issues of concern. My attempts to reduce any possible researcher bias are described below in the Data Collection section.

#### **4.8.4 Timeline for Second Phase of Study**

- Step 1** Initial approval and support from the Principal was obtained
- Step 2** Identification of student and teacher participants
- Step 3** Ethics Approval/Confirmation
- Step 4** Participant letter/signed consent, Parent/Carer and Young Persons letters/signed consent
- Step 5** Teacher Professional Learning Session — EISIL PowerPoint
- Step 6** Teacher completion of 'Student Report'
- Step 7** Pre-Intervention questionnaires
- Step 8** Implementation of EISIL
- Step 9** Journal entries by students and teachers
- Step 10** Refresher EISIL for students
- Step 11** Post-Intervention interviews
- Step 12** Teacher Focus Group
- Step 13** Coding and analysis
- Step 14** Write-up

#### **4.9 Data Collection**

As the researcher I am aware of my advocacy of the importance of understanding the role of the emotions (Emotional Intelligence) in learning, and as the deliverer of the EISIL I was acutely aware of the challenge to suspend my own subjective bias. Daly (2007, p. 98, cited in Liamputtong, 2009, p. 5) writes that in order to examine how a specific aspect of lived reality is constructed, researchers need to suspend any prejudgments about that reality so that they may 'see it as the participants would see it'. By recognising this and being critically aware of these prejudgements I can at least suspend some pre-conceived notions of the effectivity of the intervention. In addition, by triangulating the data and using a 'critical friend' (a school counsellor who is a registered psychologist) I sought to overcome the possibility of bias.

The triangulation of data and the tracking of the EISIL strategies is graphed in a simple matrix in Table 2. Following the table, the different foci of data collection according to Mills are presented.

**Table 2: Triangulation matrix of data-collection instruments to explore student use of EISIL strategies**

<b>Research Areas</b>	<b>Pre-implementation</b>	<b>During Implementation</b>	<b>Post-Implementation</b>
<i>Describing the students' perceptions of their EI competencies</i>	EI attributes Likert Scale: students		Student interviews
<i>Describing the students' learning</i>	Teacher 'Confidentials'		Teacher interviews
<i>Describing the students' perceptions of the ways EISIL enhances, or not, their learning</i>		Journals	Student interviews Student emails
<i>Seeking the view of teachers in substantiating the students' perceptions of the impact of EISIL on their learning</i>	EI attributes Likert Scale: teachers	Teacher–researcher observation	Teacher interviews
<i>Seeking the view of teachers on the impact of EISIL on student learning</i>			Teacher focus group

#### **4.9.1 Data Collection through Experience and Position**

Because of my role in the school, I was able to collect data through observation. As a participant in the activity being studied I can be described as a participant observer. At some times I was an 'active participant observer' and at other times a 'privileged, active observer' (Mills, 2011, p. 75). When delivering the EISIL I was observing my own teaching practice as an 'active participant observer' and in my LaST role as a 'privileged, active observer' I was able to observe my students when I was not directly responsible for them. Mills (2011, p. 75) describes how valuable these times have been for teachers, 'allowing them time to observe social interactions of the students and the impact of a particular instructional strategy on those interactions'.

#### **4.9.2 Data Collection through Examining**

##### **4.9.2 (i) Questionnaires**

Gay, Mills and Airasian (2009) suggest the option of using 'Attitude Scales' to allow teacher researchers to determine 'what an individual believes, perceives or feels' (cited in Mills, 2011, p. 91). This technique appealed to me as a researcher as I wanted to know how teachers and students 'felt' about students' EI competencies.

Two questionnaires, one for students and one for teachers, were devised to assess the awareness of EI stance in the school/class environment. Descriptors of EI competencies were positioned on an Attitude Scale. Davidson and Begley's (2012) Chapter 3: 'Assessing your emotional style' in *The emotional life of your brain*, proved a valuable source in constructing suitable questions. (Copies of questionnaires can be found in Appendix J: Student Recognition of EI competencies questionnaire and Appendix K: Teacher identification of student EI competencies questionnaire.). If there had been a disjunction

between teacher and student views a follow-up comments section would have been issued for further clarification but this did not prove necessary.

The following Emotional Intelligence competencies were used for the questionnaires:

*Self-awareness* in the classroom

- Understanding personal moods and emotions
- Recognising how personal efforts affect others

*Self-control*

- Control of disruptive impulses and moods

*Motivation*

- A passion for learning
- Energy and persistence to learn

*Empathy* (for other students and the teacher)

- Understanding the emotions of others

*Relationship Skills* (with other students and the teacher)

- Working effectively with others to achieve learning outcomes

#### **4.9.2 (ii) Journals and Student Reports**

Student emails ('electronic journaling') were another source of data in Action Research Cycle 2 and 'Confidentials' from teachers continued to be a rich source of data.

#### **4.9.3 Data Collection through Enquiry**

##### **4.9.3 (i) Recorded interviews post-intervention**

The pilot study responses to the post-implementation questions guided development of the Action Research Cycle 2 interview questions. Student semi-structured interviews focused on students' feelings and perceptions of their learning performance in the classroom. Teacher

semi-structured interviews focused on perceptions of students' learning behaviours and performance. Questions that guided the interviews were:

For students:

- Could you describe for me how you have used strategies from the EISIL in your learning in the past weeks? How did they affect your learning?
- What strategy did you find most useful and why?

For teachers:

- What EISIL (Emotional Intelligence) strategies have you observed this student using in class?
- How does using the EISIL strategies improve this student's Attitude, Effort and Performance?

Students and teachers were given a 'memory jogger' sheet to assist them at interview. (A copy of the memory jogger sheet can be found in Appendix B.)

The matrix shown in Table 3 was used to track each student's use of EISIL strategies identified in interviews.

**Table 3: Matrix of student use of EISIL strategies identified at interview**

EISIL strategies e.g.	Student	Teacher A	Teacher B	Teacher C	Teacher D
<i>Brain bits</i>					
<i>Self-awareness</i>					
<i>Self-control</i>					
<i>Emotional Hijacking</i>					
<i>Etc</i>					

#### **4.9.3 (ii) Focus Group for Teachers**

To increase the power of the research process another data-gathering instrument was added at the end of Action Research Cycle 2. A focus group with teachers was held to explore teacher experiences interactively (Stringer, 2008, p. 66). The teachers had the opportunity previously to explore the use of EISIL individually and the subsequent joint process of collaborative inquiry by focus group exploration provided a context for participants to share information about the use of EISIL. A focus group is 'a useful technique when the interaction among individuals will lead to shared understanding/s' (Mills, 2011, p. 82). Interactions in a focus group also assist in clarifying understandings and mitigating against potential bias.

##### Focus Group Questions

- How useful is EISIL scaffolding to improve learning?
- How could the tools of EISIL be used in teaching and learning?

These questions were given to teachers on their 'memory jogger' sheet, at their personal interview in preparation for the focus group.

#### **4.10 Triangulation: Data validity and benefits of teachers as sources of data**

The data collected in the Action Research study needed to show if Emotional Intelligence scaffolding contributed to improved student learning. Citing Greenwood and Levin (2000), Mills (2011, p. 103) argues that:

because action researchers do not make claims to context-free knowledge (that is, by its very nature action research is based in the context of our own classrooms and schools), issues of credibility, validity, and reliability in action research are measured by the willingness of teacher researchers (and the stakeholders in our studies) "to act on the results of the action research, thereby risking their welfare on the 'validity' of their ideas and the degree to which the outcomes meet their expectations" (p.98). In

short, the validity of action research depends on whether the actual solution to a problem (our planned intervention) actually solves our problem!

My study met this criterion. The pilot study suggested that Emotional Intelligence scaffolding could contribute to improved student learning and a further action research cycle assisted in ensuring the 'trustworthiness' of this result. The study reflects Lincoln and Guba's (1985) criteria for validity of qualitative research: credibility, transferability, dependability and confirmability (Stringer, 2008, p. 48), as described below.

Credibility was addressed by:

- my prolonged presence at the study site: I was immersed in the setting and could undertake persistent observation
- peer debriefing of my work, when supporting staff and discussing progress with the Principal, Deputy and School Counsellor
- triangulation of data. I collected data from four teachers and 12 students across four different subject areas in six different formats: student and teacher questionnaires, student emails, student interviews, teacher interviews and written reports and a focus group. This 'overlap method' (Mills, 2011, p. 104) also addressed the dependability or stability of my data.
- an audit trail consisting of a written description of the process of data collection and discussion with a 'critical friend'.

Confirmability of the data was addressed by the triangulation process where different data sources and different methods were used to cross-check data. To ensure validity the study employed Wolcott's (1994) strategies for ensuring the validity of action research (adapted by Mills, 2011, pp. 110–112):

- Talk little; listen a lot

- Record observations accurately
- Begin writing early
- Let readers 'see' for themselves by including primary data to let readers of action research see the data for themselves
- Report fully
- Be candid
- Seek feedback
- Write accurately

Apart from the lesson delivery of the intervention, I 'talked a little, listened a lot' and gave my respondents time to respond and 'avoid being my own best informant'. To 'report fully', I kept track of discrepant data to assist further explanation of what was going on in classrooms and to 'be candid' I made explicit those biases or events that occurred during the study that may have affected the outcomes. To 'seek feedback' and 'write accurately' were addressed through discussion with my colleagues, senior executive, and 'critical friend'. My intention was to include as much of the primary data as possible in order to earn cooperation on possible future action research cycles.

#### **4.11 Conclusion**

By encompassing the context of the action, the intentions of the actor and the evolution of the action (Dey, 1993), the methodology used in this study leads to a rich and thick description of the phenomenon and an interpretation of the meaning it has to the participants who experienced the phenomenon. Involvement in an action research process gives teachers permission to look closely at previous methods used and trial new ways of doing things. The findings at the end of each cycle not only give valuable feedback but also prompt more changes to occur. Cochran-Smith and Lytle (2004, cited in Baumfield, Hall & Wall, 2013, p.164) identify three different enquiry–knowledge–practice relationships:

- Knowledge *for* practice — to implement/codify for dissemination (formal knowledge)

- Knowledge *in* practice — to uncover and enhance (situated knowledge)
- Knowledge *of* practice — to generate local knowledge within enquiry communities (testing knowledge in context).

Schools and teachers can foster these three types of knowledge creation to enhance the teaching and learning process by testing their ideas in the classroom. Chapter 3 described the implementation and testing of EISIL in the classroom, by testing knowledge in context to uncover and enhance situated knowledge and to contribute to formal knowledge. The following chapter presents this formal knowledge — the results of the intervention.

## **Chapter 5: Findings: Impact of EISIL on individual students' Attitude, Effort, Performance and EI competencies**

The findings of the study are presented in two chapters, each with a different interpretive lens applied to the conceptual framework presented in Figure 2 and Table 1. Chapter 5 builds a picture of students' individual responses to the intervention and changes in their EI competencies and Attitude, Effort and Performance. Chapter 5 also describes teachers' reflection on the EISIL experience. Chapter 6 interprets the engagement of students with each of the EISIL strategies and the perceived effects of each strategy on student learning. Chapter 7 discusses the value of EISIL and its implications for pedagogy and teacher professional learning.

### **5.1 Introduction**

The data presented in this chapter show how EISIL impacted on each student's Attitude, Effort and Performance as seen through the eyes of the individual students and their teachers in both Action Research Cycles. Information gathered from the teacher focus group in AR Cycle 2 reveals how the teachers perceived the impact of the EISIL intervention on the classroom learning environment (Attitude and Effort) and on student learning (Effort and Performance).

A table of pseudonyms follows for participants in each Action Research Cycle:

**Table 4: Table of Pseudonyms**

Action Research Cycle 1: Pilot Study

<b>Students</b>	<b>Teachers</b>
Andrew	Mr Jones
Briony	Ms Mahoney
Caitlin	Mr White
Daniel	Ms Bates

Action Research Cycle 2

<b>Students</b>	<b>Teachers</b>
Aaron	Mr King
Bree	Mr Brook
Cale	Ms Garland
Dana	Ms Young
Emma	
Frank (Indigenous)	
Gene	
Harry	
Indi	
Jacqui	
Kobe (physical disability)	
Leigh (Indigenous)	

EISIL taught students about EI competencies — both the personal competencies for managing one's own emotions (*self-awareness*, *self-regulation* (including *self-control*) and *motivation*) and the social competencies for managing others' emotions (*empathy* and *social skills*). The EISIL strategies were designed to help students develop cognisance of their emotions, their EI competencies, and the factors that influence their thinking (metacognition). Thus students were encouraged to 'metacognitively' identify and manage their own emotions to stay focused on learning and others' emotions to improve their relationships with class members and their teachers in order to enhance the learning environment. Students and teachers were asked to identify use of EISIL strategies and comment on any improvements in students' Attitude, Effort and Performance that were perceived to be attributable to the deployment of these strategies. In their comments, students and teachers used the three inter-related sets of terminology: (1) Attitude, Effort and Performance from the school's assessment criteria; (2) the EI competencies such as *self-control*; and (3) terms associated with EISIL (e.g., Delaying Gratification).

In order to analyse the content of my text I used a 'structured process' (Hsiu-Fang & Shannon (2004, p.1281) to read the different texts (interview and focus group transcripts, confidentials, emails) and highlighted instances of direct use of the terms (EI competencies; A, E and P; EISIL terminology), then re-read to find descriptions (indirect use) of the terms. I then collated by term/description in order to aggregate relevant student and teacher data.

## **5.2 Findings: Action Research Cycle 1 Pilot Study**

The results of Action Research Cycle 1 Pilot Study build a picture of students' individual responses to the intervention and changes in their EI competencies and Attitude, Effort and Performance. All students ( $n = 4$ ) were observed by their teachers (as evidenced through

'Confidentials' and Interviews) to have changed their learning behaviours since experiencing the EISIL. Students gave the following feedback related to the value of EISIL. These included:

- knowing the structure of the brain: 'which part of the brain did what' and the effect of emotions on behaviour and learning
- knowing about being self-aware and more aware of others' behaviours helped them understand their own and others' behaviours
- empathising with their teachers to try to understand what they are saying and allowing them time to work with other students needing support
- using the breathing exercises to calm themselves down.

After EISIL three students were less dismissive of their less able peers and sought to assist others in the learning process. One unmotivated student began discussion about his learning with his four teachers and another student increased her on-task behaviour; both of these students improved a test result. These changes to Effort, Attitude and Performance were encouraging and inspired a further, expanded cycle of Action Research (Cycle 2).

The student and teacher perceptions of the impact on EISIL on students' EI capabilities in the pilot study were positive. In their interviews I noticed they were using the vocabulary of the EISIL to describe these changes. This led me to believe the EISIL scaffold could be an effective framework to organise my data, using the language of EISIL.

An example of how a student responded to EISIL using the language of the scaffold is student Andrew who indicated he found the description of 'brain bits' in EISIL useful to understand the nature of emotions, and he felt increased *empathy*, *self-control* and an improved ability to concentrate in class through the use of Mindfulness.

I found that the brain [Triune Brain] really helpful and beneficial because it explained how or which part of the brain actually did what thing, so how it affects your emotions helpful.

It appeared Andrew recognised the neural conversation between his emotional data and his own cognitive processing.

I can sort of *empathise* if that's a word for it, that they [other students] can't understand it. And self-control, I've been able, you know, not mouth off if I've wanted to and held back some of the things I could have said just to make things better.

Two of Andrew's teachers agreed with this perception when they stated:

this particular student may be actually using these strategies to make himself and other students feel better I guess. [Mr Jones]

He turned to look at a student sitting beside him and when she hadn't kept up with him he didn't seek [teacher's praise] anymore he waited and waited to see what happened. [Ms Bates]

Andrew has become much less dismissive of other students who aren't as capable as him and much more empathetic to their learning needs in the class room. I've seen him offer himself almost like a peer tutor to say that they would help with another student in class tasks, offering them some assistance there. [Ms Mahoney]

Andrew has also been described as having increased empathy for his teacher's need to assist other students. Andrew's new found *empathy* (Attitude) for his fellow students has allowed the teacher time to offer support to other learners and Andrew has also 'stepped up' to offer peer assistance to fellow students. This tutoring experience is likely to benefit Andrew's learning too. Ms Bates describes Andrew as being:

also empathetic towards the teacher in letting the teachers spend some time with the students who do need to be well supported. He's interacted and engaged with other

students who he normally wouldn't work with and he's also minimised his need for teacher praise and now happily will continue with his work. [Ms Bates]

Andrew also began to metacognitively reflect on his ability to concentrate in class and he initiated the EISIL strategy of Mindfulness to increase his focus (Effort).

I haven't been zoning out as much. I've been able to concentrate a bit more just by breathing [Mindfulness], using one of the breathing exercises to try and concentrate on that, rather than looking at my laptop or any other person that might distract me.

EISIL appears to have helped Briony's demeanour in class. Briony's teachers have observed a calming effect of EISIL as she appears to be recognising and reflecting on her emotions and the emotions of others in the classroom. Her increased sensitivity (Attitude) to other students has contributed to a positive learning environment. Three of Briony's teachers agreed with this perception when they stated:

she's been more considerate in class and she's actually a little bit more well-mannered. So that's been a bit of an improvement I noticed, only subtle but it's there, and I don't know if you could say this is the result of EISIL but she seems to be a bit calmer. [Mr Jones]

I have seen her developing over the last couple of months but this program perhaps has helped her see ... how her behaviour has effects on other people. I think in time I would expect her to continue along this path of being settled and trying to learn. [Mr White]

she's actually offered to read other students' speeches for them so they don't have to get up in front of the class. So it's been really fantastic to see her looking at *other peoples' emotions*. [Ms Bates]

In addition to her increased calmness in class, Briony's teachers perceived she had increased *empathy* as evidenced by her offer to read other students' speeches and this had improved her *relationship skills* after experiencing EISIL.

Caitlin was able to articulate her new relationship with her peers after EISIL. She indicated she had increased *empathy* towards other students and an increased ability to remain focussed and had improved her *relationship skills* in class. She used EISIL terminology to label her understanding of the classroom behaviours of other students. She feels she now has an explanation for it: a lack of EI! This insight has given her perspective on their behaviours and it appears that rather than be critical or angry with them, she now just refocuses herself on her own work:

I've realised that some people are doing some things because of their Emotional Intelligence. Before I never really used to acknowledge that they were doing it because of their Emotional Intelligence, but rather because they wanted attention or something like that.

It [EISIL] has helped my learning because it's just been easier to focus on things when you realise why everybody's acting like that around you, it's easier to focus.

Ms Bates and Ms Mahoney endorsed Caitlin's view of herself in the classroom:

Caitlin has actually demonstrated some restraint and more restraint in the last few weeks to months I would say. Caitlin has always been a very capable student but she's very quick to make judgments and very quick to act on those judgments and often doesn't give a person an opportunity to disprove her early beliefs. [Ms Bates]

The value of EISIL for capable students is endorsed by Caitlin's teachers as it may assist them to see value in co-operative learning in the classroom. They describe some examples of her new behaviours:

I can think of a few examples fairly recently where Caitlin showed more restraint (Managing her Emotions) than I have observed previously where one student asked a

question and then offered their own answer to the question and it was an erroneous answer. Now previously Caitlin would have tut-tutted, crossed her arms, looked frustrated and then just missed their reaction and their thought process. Whereas in this particular incident before I could intercede and direct them where to look or what to do she said 'why don't you look at the assignment question' and she didn't - her tone of voice was different to a Caitlin tone of voice where she would have said it with a dismissal and an implication of ignorance in her tone of voice. This time it was "let's look at [it]' (*empathy*) and she actually turned back to her assignment, sitting next to the student, and read it through with them which to me was very, very different for a Caitlin response. [Ms Mahoney]

Caitlin appears to have metacognitively reflected on her relationship with others in the classroom, appearing to see the value in working co-operatively with others to enhance learning for all in the classroom. The value of the EI competencies *empathy* and *relationship skills* appear to have resonated with Caitlin:

Caitlin is a gifted and talented student who in previous weeks had shown very little tolerance for students of a lower ability and sometimes teachers who she thought weren't challenging her in class. She's been exhibiting examples of her ability to *self-control* her frustration and anger and manage that internally rather than expressing it in a negative way. Often she's turned around and offered help to students who needed it. I know out of the class room context I saw her walking past a student completing an exam in the corridor who was really struggling to complete their exam and she offered assistance, although she couldn't actually give them assistance it was nice to see that she offered it. [Ms Bates]

EISIL has also assisted a lower ability student to connect with his teachers. Daniel's teachers indicated after EISIL his Attitude and Effort had improved in class and they perceived he had improved his *relationship skills* with them. If EISIL was able to improve the relationship students had with their teachers it could provide valuable assistance in

promoting learning in the classroom. Daniel's participation in the EISIL group may also have contributed to his more positive Attitude to participation in the yearly exam. Daniel initiated communication with his teachers and responded positively to their praise for his change in Attitude, Effort and Performance:

He's actually learning more. He puts more Effort into his work. He sat down and really made a big effort on his yearly exam ... he put in a really good effort which I praised him for and he was really pleased about that. [Mr Jones]

Just over the last four, five weeks I have noticed him developing a better Attitude. He seldom comes and talks to a teacher about his work but he has talked to me about this work, about this achievement. [Ms Bates]

Thus, student use of the Emotional Intelligence scaffolding was very encouraging. Even in this very small sample, there appeared to be value in adding the Emotional Intelligence strategies to the learning toolkit of able and less able students.

### **5.3 Findings: Action Research Cycle 2**

The results of Action Research Cycle 2 continue to build a picture of students' individual responses to the intervention and changes in their EI competencies and Attitude, Effort and Performance. The twelve students are presented individually. Students describe their awareness of their EI competencies before EISIL, the changes they perceive in themselves after EISIL, including any impact they perceive it has had on their Attitude, Effort and Performance. Teachers were asked to comment on the same criteria. Their considered responses are presented and compellingly appear to reflect the students' perceptions.

#### **5.3.1 Individual Students and the impact of the EISIL program**

Pre-intervention, individual students completed a self-evaluation of EI competencies (see Appendix J) and teachers also completed a questionnaire asking them to assess students' EI competencies (see Appendix K). Teachers also completed a 'Confidential' (see Appendix

G) report on each student to describe their Attitude, Effort and Performance. After the EISIL intervention students and teachers were interviewed to ascertain the impact of the EISIL experience. For each student, self and teacher perceptions of use of EISIL strategies, changes in EI competencies and thus in Attitude, Effort and Performance, are described below. A summary table of each student's data is also provided.

### **Aaron and EISIL**

Before EISIL, Aaron saw himself as *self-aware*, having *self-control*, fairly empathetic to others and with *relationship skills*. His teachers viewed him as having limited *self-control* to strong *self-control*, *empathy* for others and in general, a confident relationship with the teacher. While the teachers' assessment confirmed Aaron's self-assessment, teachers also noted that he needed *motivation* and persistence to improve his Performance.

After EISIL, Aaron has found it easier to Control his Emotions and improve his Attitude:

When other students muck around, sometimes [I'll] sit there and not do anything.

Three of Aaron's teachers agree with his self-assessment of an improvement in Attitude and/or Effort. He appears to have improved *self-control*, Anger Management, Empathy and Motivation:

He's maybe a little bit more stable; a bit more of a calming, sort of stabilising influence [*self-control*]. ... he's a bit easier for me to get back onto task, remain on track, easier to re-direct. [Mr King]

He's been reserved and when he gets off side rather than lashing out he's just been quietly passively aggressive. He's not so quick to get angry but will actually, to a small degree, listen to what I've got to say [*Empathy, Anger Management*]. [Mr Brook]

I also think now that he's wanting to work, he's thinking about what he's doing, trying to stay on task. I think his learning is a lot different. He's on task more often and is actively involved in the lesson, asking lots of question, wanting to know more and making comments on things... it's really great to see him involved in the classroom.

Overall his Attitude to learning has improved and his involvement in the class has improved [*motivation*]. [Ms Garland]

Aaron also feels EISIL has helped his learning [Performance]:

It's improved a little bit. It's been easier to pay attention in class. ... A little bit of work in class, that sort of Performance is up.

Teachers also noted changes in Aaron's Performance:

I think he's achieving more outcomes in class. [Ms Garland]

He's also picked up a lot of *motivation* in his class particularly with some types of activities that we do, he would sit there in the past year, and say 'I can't do this miss, I don't understand' and instead he's now having a go —having a crack at the task, before instantly asking me to come over. So I can see his Effort and Attitude and overall Performance changing. [Ms Young]

Some indicators of EI competencies are highlighted in italics above. Further comments about the use of these competencies by Aaron are described below.

Aaron reported having increased *empathy* for the teacher:

I have been Recognising and Managing Others' Emotions, when the teacher's in a bit of bad mood sort of thing. So I just sit down and do work a little more, if they're a bit cranky.

Ms Young supported Aaron's self-assessment of improved *empathy* and also saw a change in his *relationship skills*. She has noticed him asking her about her teaching day, responding to her teaching efforts, engaging with her in discussion about aspects of EISIL and encouraging others in their learning.

[Aaron] has implemented a number of strategies from the emotional intelligence competencies particularly *empathy*, in terms of Managing Others' Emotions. He's often come into class in recent weeks and asks how have I been, how has my day been going and really wanted to know how I am. I've seen, if my day hasn't been so good he's been able to change and modify his behaviour and his Effort in class. So if he can

tell that it hasn't been a great day he'll actually make sure he tries even harder. He's also asked a lot about other students' emotions and has encouraged others in terms of their learning as well. So, he's been 'oh g great effort' with someone else's creative writing. [Ms Young]

Aaron is perceived to have improved his Attitude, Effort and Performance by using the EISIL to recognise and Manage his Own and the teachers' Emotions in class, resulting in g reater *motivation* to stay on task and potentially achieve more learning outcomes. In terms of the EI competencies, he has developed more *empathy* and has improved his *relationship skills*.

*Summary Table Impact of EISIL: Aaron*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>					
<b><i>Self-Control</i></b>	✓	✓	✓		
<b><i>Motivation</i></b>	✓	✓		✓	
<b><i>Empathy</i></b>	✓				✓
<b><i>Relationship skills</i></b>		✓			✓
<b><i>Attitude/Effort/Performance</i></b>	✓		✓	✓	✓

### **Bree and EISIL**

Bree sees herself as *self-aware*, with limited *self-control*, empathetic towards others and having limited tolerance for teacher reprimands. She likes working in a group. Bree's teachers agree she is *self-aware* and view her as having more *self-control* than her own assessment. Teachers see her as empathetic towards other students and her teachers. Her

*relationship skills* appeared to be variable depending on the class and teacher, ranging from the need to depend on others to being gregarious. In most classes she appeared to be disengaged and performing below capabilities bar one subject. After EISIL, she had strategies 'to do things better' by changing the way she thought. She remembered the 'Brain Bits' strategy:

I don't know what anything is actually called...it's sort of like a subconscious thing...since we got taught it, it's not something that I actually think about doing. It's not, like, before I do something it will be, I'm gonna use that EISIL strategy there. It's just, 'this is how you do things, X' [says her own name].

It's just how to do things better without getting myself into more trouble than I'll be in. It's that sort of thing – Brain Plasticity or how we can change the way we can think ...that's it ...it just took me a while to get there.

Bree was able to invoke EISIL terminology to describe her greater ability to Manage her Emotions by Delaying Gratification which suggests stronger neural dialogue between her limbic system and cognitive processing.

I reckon that I probably used it [EISIL] at home more — not a lot more but more than I've used it at school, I don't know what anything's called...I've got to find what it is called, it is, it is, Recognising Others' Emotions and Managing Others' Emotions, Delaying Gratification I reckon...

I didn't think of it before but at sport I didn't want to do the sport I was in but I made a compromise with Mrs S [teacher organising sport] so I'd do school sports so I'd actually be doing something but I'd still be with my mates in sport.

Teachers confirm her increased ability to Manage her own Emotions. Bree is described as having a powerful, at times negative presence in class and after EISIL, she appears to be more receptive to re-direction and more sensitive to the needs of the rest of the class:

[She is] easier to remind to get on task so is more receptive and cooperative that way. [Mr King]

Probably *self-regulation* would be the main thing that's happened with this student insofar as being able to become not so much objectionable but offended, in other words the reverse when she's encouraged, let's say to do her work. [Mr Brook]

Bree has also implemented some strategies in terms of managing for emotions in terms of Delaying Gratification. Sometimes she would not call out but she would ask questions that would divert and side-track the rest of the class. It would be somewhat on topic but mostly designed to pull us off topic and I think she would see that it would frustrate me because I would want to answer her valid question but it was just not the appropriate time and it would frustrate the class. I think she does do it across the board sometimes. She does like to be different and sometimes be at the centre of attention and be a bit out there. So I haven't seen as many examples of her doing that now. [Ms Young]

Bree has also used the Anger Management strategy:

When the teachers get angry at you I just kinda shut up and leave them alone, like, I'm a bit of a dick to teachers sometimes, like, if they annoy me, and I'll annoy them back and nothing goes very well from there ... oh, I just remembered this one, Assertiveness not Aggressiveness.

Teachers endorsed this change in Attitude through her use of EI competencies, particularly those related to Managing Others' Emotions. Her increased *empathy* for teachers has improved her relationships with them and three teachers state this has led to improvements in her Motivation and Performance:

[She's shown] a bit more *empathy* from, on, my situation where I explain this is what I'm trying to do and it's for you guys sort of thing...engaging in conversation can be very constructive more often now. ... There's a bit of positive response in that way and that often can get a bit more *motivation* and work and cooperation. [Mr King]

More recently she's been requesting assistance and she's still quiet and reserved but tending to be a little more — well, I guess she has more *empathy* for what I'm thinking. So by having at least consideration and empathic feelings for other people about what they're thinking she's probably starting to listen more about — or not so much listen but consider my role in things as a teacher. So that's probably helping her to come back to substantiating her Performance. [Mr Brook]

She has also been able to develop a better relationship with me and manage my emotions. She has never once submitted, in the two years I have taught her, submitted an assessment task on time. The last assessment task that she had due a couple of weeks ago, she didn't hand in on time and when she saw my disappointment and my reaction that again she hadn't done it, the next day the assessment task was there and usually after any assessment task it takes her a few weeks to submit it ... definitely an improvement there. [Ms Young]

The improvement in her *relationship skills* with other students and particularly her teachers has also impacted on her Performance. Bree appears to have heeded the significance of empathy in EISIL, listening and responding to other students in class and being more respectful of her teachers' requirements. Again this suggests an improved neural connection of Bree's emotional system to her cognitive processing: she has learnt that managing others' emotions will assist in improving her own learning:

I think also she has developed some other relationships with other students in the class. She was quite isolated to her own friendship group and I think often purposely alienated other students in the class and wouldn't respond to their comments in a class discussion. So I think she's become a lot more accepting of the other students' opinions which has definitely enabled her to focus on her learning and achieve better results. [Ms Young]

Bree's self-assessment and feedback from her teachers indicate that she has improved her Attitude, Effort and Performance by using EISIL strategies and EI competencies. In particular, she is now able to recognise and Manage her Own and the teachers' Emotions, through increased *empathy* and improved *relationships* with other students and her teachers. She is also using the EISIL terminology to describe her own thinking and behaviours.

*Summary Table Impact of EISIL: Bree*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>	✓				
<b><i>Self-Awareness</i></b>					
<b><i>Self-Control</i></b>	✓	✓	✓		✓
<b><i>Motivation</i></b>		✓		✓	
<b><i>Empathy</i></b>			✓		✓
<b><i>Relationship skills</i></b>					✓
<b><i>Attitude/Effort/Performance</i></b>			✓		✓

### **Cale and EISIL**

Cale sees himself as very *self-aware* and with strong *self-control*. He views himself as empathetic and sensitive to others' emotions, although he is indifferent to working in a group. His teachers agree with his assessment of being aware of his own limitations and having strong *self-control*. He is self-directed and empathetic. He has some difficulty in his work-related relationships — he's dependent on certain others or isolated from others. He has an excellent relationship with his teachers, is hardworking and performing well.

Cale said EISIL has improved his Attitude and his *empathy* for the teachers (Managing Others' Emotions):

[I] notice other people's expressions. Well you can see whenever the teacher wants you to be quiet. Because if you're always distracting look at the teacher, see that they want you to listen so you can stop what you're doing and listen to what they've got to say.

The teachers also noted this change to being more aware of other people's emotions, i.e., to *relationship* cues. EISIL appears to have empowered him by giving him a vocabulary to express his emotions. While Cale expressed a change in Managing Others' Emotions in terms of the teachers, the teachers saw the change in terms of his relationships with other students, with a flow-on effect on Performance.

Yes I think it's mainly just him paying attention to the cues that are coming from other students about what his reaction should be and I notice he's coming out of his shell a bit better and that's just been pretty recent too. So that could be the EISIL coming to the fore there, where he's actually considering 'well I'm going to be more part of the group if I act like part of the group. So rather than just sitting there being aloof which may tend to give the impression that he's not caring. But he does and I think that's one of the things that he'll learn from this as he starts to think 'well I have a role in this, what I'm thinking and how I think of others is actually going to change or assist what I'm doing here.' So I think that works for him. [Mr Brook]

I think he's taken the strategies on board and continued to implement them. I think he had those tools. He may not have been able to label those tools but I think now he's able to use them and know that it works and know that it is going to improve his Performance. [Ms Young]

Cale I think I've seen the biggest change in. I feel that he is feeling good about himself at the moment with the work that he's producing. At the start of the year he was very

unsure of himself. I think he's working harder. He's listening more and he's more confident in himself. He knows the work... I can see in his mannerisms and in the classroom the way he looks and talks and ears prick up and his eyes open [Attitude] when he knows the answer to something or he knows what's going on. So he's listening and he's working and he's asking lots of questions [Effort] and he's a bit more confident I think in his ability. He's receiving some excellent results in test work [Performance] which has improved in the last two topics that we've done. [Ms Garland]

It appears EISIL has assisted this student to fine-tune his *relationship skills* with other students and his teachers by encouraging him to 'notice' (Recognise) Others' Emotions. He has also identified invoking the Mindfulness strategy when he gets 'a bit stressed in class' to control his emotions and 'calm down'. The ability to label EISIL's effective learning strategies he is using has given him increased confidence and teachers feel his Performance is improving accordingly.

*Summary Table Impact of EISIL: Cale*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>			✓	✓	✓
<b><i>Self-Control</i></b>	✓				✓
<b><i>Motivation</i></b>					
<b><i>Empathy</i></b>	✓				
<b><i>Relationship skills</i></b>			✓		
<b><i>Attitude/Effort/Performance</i></b>				✓	

## Dana and EISIL

Dana sees herself as being *self-aware*, as having *self-control* and being empathetic. Her teachers concur, viewing her as aware of her own limitations with strong *self-control*. She is self-directed and very empathetic. She is selective in her relationships with others and has a confident relationship with the teacher. She is a hardworking student, yet struggles in some subjects and could be performing better.

Dana has been using EISIL in relation to Managing her Own and Others' Emotions and improving her Attitude and Effort:

[I] recognise my fellow classmates' emotions and people around me and the teacher's emotions when I walk in the classroom and it's helped me become more recognised of my own emotions and reactions to other people and respond to other people and their reactions and emotions.

It [EISIL] just helps me concentrate on my work and helps me and encourages me to keep going, especially if it's someone I don't particularly like, and yeah it just helps me.

While her teachers recognised her competence in using EI strategies before EISIL, they also noted some changes, related in particular to Managing Emotions and improving her Performance. They endorse EISIL's potential to support improved Performance:

Her *motivation* in terms of class work and desire to succeed I've noticed an improvement as well and just peer Performance she's improved and she's very aware of that and very excited obviously. [Mr King]

[This subject] isn't her forte yet she always makes a great Effort, she's diligent, quiet and hard working. But I think what I would like to see happen here is more being aware of her own virtues to get her motivated into achieving what she doesn't think she can achieve. Her Attitude and her Effort are not a big question but I think the EISIL will come into its own here, if she can adapt these strategies to improve Performance because that's where we need to go with her. [Mr Brook]

I think that she would probably benefit a lot more from this sort of help. [Ms Garland]

EISIL strategies have assisted Dana to identify and control her emotions enabling her to feel more optimistic about her relationship with peers. It appears she is using neural plasticity to 'change the way she thinks' about her relationships and this is having a positive effect on her Performance in class. Dana's use of EISIL strategies to label and Manage her emotions enables her focus on the positive in her relationships and allow her to concentrate on her classroom performance:

Dana was dealing with what she perceived as bullying in the classroom context. However, further investigation led me to believe it may have been one or two occasions where a student had made a joke or what was meant to be a joke but she interpreted that as bullying, has taken it away and then stewed on it. So I think she's been able to be more aware of her emotions and not get so worked up about something, making a mountain of a molehill so to speak. And she's always been able to Manage My Emotions as a teacher. I've noticed her more recently taking note of how my emotions change during the lessons depending often upon the behaviour of the class. I think with that bullying incident and her being able to label and become aware and control her emotions, I think it's also helped her develop *relationship skills* with other students to feel confident that she does have those relationships, good relationships with her peers, and they're not out to make her upset. So I think that's been able to improve her Performance in class, she's not focussed on the negative. She's able to realise what their intentions are. [Ms Young]

In email correspondence later in the year Dana made the statement that when she reflected on the use of EISIL, she felt that she had grown further in terms of Managing Emotions. She has also invoked the use of EISIL's Mindfulness strategy to increase her capacity to Manage Emotions.

From my experience with learning more about EISIL, I have become a lot more aware of my own emotions and a lot more aware of other people's emotions around me. It has helped me realise the emotions of others mean a lot more than I thought before. My ability to realise/identify the emotions has established me to try and manage my emotions. It's a lot harder than I thought but I hope that will improve. I have some quiet time with myself [Mindfulness] and just take some time to talk to myself, tell someone who may care about my emotions and how I feel ... e.g., someone tells me they love me.

Dana and her teachers perceive that EISIL has assisted her to be more confident in the relationships she has with other students by Managing her Own and Others' Emotions. She has also exhibited continued ease of use of the EISIL terminology and techniques suggesting some embedding of the strategies in her neural pathways. Her teachers emphasised continued use of EISIL will increase her confidence in class and her Performance will improve.

*Summary Table Impact of EISIL: Dana*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b>Brain Bits</b>					
<b>Self-Awareness</b>	✓	✓		✓	
<b>Self-Control</b>	✓				✓
<b>Motivation</b>					
<b>Empathy</b>					
<b>Relationship skills</b>	✓				✓
<b>Attitude/Effort/Performance</b>		✓			✓

## Emma and EISIL

Emma sees herself as being *self-aware*, as having *self-control* and being empathetic. Her teachers also see her as composed with strong *self-control*. She is self-directed and empathetic, selective in her relationships with others, and has a mature relationship with the teacher. She is talkative, yet works hard [Attitude and Effort] and achieves excellent results [Performance]. Emma has used the Recognising Others' Emotions and Mindfulness components of the EISIL to improve her Attitude and Effort. She related how she used the strategies;

By using the facial expressions in Recognising Others' Emotions and just when teachers are getting annoyed by the class. You can just tell on their face and stuff and when I see that, I stop talking, try to listen to what they're saying. To concentrate on the immediate environment, I just tune out now. I used to sometimes get distracted and stuff but now I just tend to do my work and not worry about anyone else. My friends are just sometimes talking. Sometimes I just go by myself.

Her teachers emphasise her current high level of Emotional Intelligence and her skills in Managing her Own and Others' Emotions. In describing Emma, the teachers insightfully describe a student exhibiting EI *self-control* skills they would like to see in all students. They note her effective relationships with other students and her rapport with teachers reflect the EI skills encouraged in EISIL.

I'd say at a rough guess she's probably one of your students that already employ EISIL strategies which is why her Performance is good. And she seems to be able to be aware pretty quickly about what either I'm thinking, or the students [are thinking]. This young woman's already using some of the strategies that's why she's where she is. Her Effort, Attitude and Performance are excellent really. [Mr Brook]

[Emma is] very aware of what's going on around her and of others but will be able to be involved in all the jokes and the chat that's going on yet still performs to a very high standard. She's also able to identify when others are frustrated but at the same time

will not get involved too much ... She can choose quite wisely who to engage with in terms of that classroom chatter and off-task behaviour but it's never untoward. So she's able to pick out who and where she should be associating with in order not to get in serious trouble. [Mr King]

Like if something goes wrong, being a technological issue or whatever she will mention it but won't really use it as an excuse, she'll find another way to resolve it. She will mention or ask or be confident in asking for an extension or something like that because of the issue and she's also able to go about it and word it in a mature and responsible way and as a result it will normally go in her favour. [Ms Garland]

There was some improvement in her interpersonal skills after EISIL as noted by Ms Young. She has seen some changes in her *relationship skills*. Emma while managing self-control of her own behaviour found it difficult to hide her frustration with lower ability students. After EISIL her *empathy* appeared to increase as she was more willing to work with these students, suggesting EISIL may make a contribution to a positive classroom climate for all students:

Her *motivation* and drive have always been evident but in recent weeks she has been really active and looking for extracurricular activities to be involved in such as Gifted Writers' Camp that's coming up, so that's good....Emma has definitely developed some great skills in terms of *relationships* with others. Emma is a high-performing student, often first or second in the class and I'd often observe her, not getting frustrated, but appear to be not so accepting of other students who aren't at the same level as her and I think she's starting to work with other students in the classroom and be able to understand and get along with them which has definitely helped her Attitude towards her peers and towards her studies. [Ms Young]

Emma already employed EI strategies in her learning before experiencing EISIL but her teachers perceive that she has added to her repertoire of these skills and has developed some skills in dealing with others [*relationship skills*] to achieve her own personal goals. She may choose to 'switch off' [Mindfulness] from what is going on around her or influence her peers to focus in class [Managing her Own and Others' Emotions], thus improving her own academic experience [Attitude and Effort].

*Summary Table Impact of EISIL: Emma*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>		✓	✓		
<b><i>Self-Control</i></b>	✓				
<b><i>Motivation</i></b>		✓			✓
<b><i>Empathy</i></b>	✓	✓			
<b><i>Relationship skills</i></b>	✓	✓	✓	✓	✓
<b><i>Attitude/Effort/Performance</i></b>					✓

### **Frank and EISIL**

Frank sees himself as being *self-aware*, as having *self-control* and with limited *empathy*. His teachers, on the other hand, see him as having problems with self-control, as he 'can get caught up in a social environment' [Mr King] and has 'struggled to tell his friends they may not be the best learning partners' [Ms Young]. They see him as empathetic but selective in his relationships with others and having a confident relationship with his teachers. He performs well when focussed. Although he views himself as having self-control, teachers feel he is part of social interactions while not actively contributing to them.

Frank described having more *empathy* after EISIL and using the strategies of Managing Others' Emotions:

Seeing the emotions and moods in my teachers and my friends when they are not feeling well or look [un]happy helps me — like it gives me an idea of what to help them with, so I can go talk to them about it ...

Frank's teachers commented on his struggle to exercise more *self-control* and his attempts to resist the distraction of other students:

He can find the distractions within the classroom I think sometimes too enticing to ignore. [Mr King]

Although he will stop when directed but I think he's struggling a bit at the moment. [Ms Garland]

He's often easily led to become engaged in off-task behaviours. [Ms Young]

He tends to be carried along a bit by some of the other more boisterous students. He is someone who needs to see how his personal relationships with his peers are being affected here and needs to establish in his own right where 'I am'. So in other words I'm not here just for the benefit of these other students and I don't need to do this just to make them feel good, it's not about them it's about me. [Mr Brook]

After EISIL his teachers noticed changes in Frank's *self-awareness*, *relationship skills*, Attitude and Effort. Mr King identified Frank's recently acquired ability to take re-direction and get back on task and Ms Young has acknowledged his new desire to improve his Performance by changing his seat in class to avoid the distractions of off-task behaviours:

He does get — well, not upset but is aware of getting caught out and doesn't always like it but he won't make a fuss about it. [Now] you can see just through facial expression he knows he's done wrong. So he's very *self-aware* at the moment he's pulled up, and he will be back on track for a bit longer after that. ... So he's obviously Motivated and wants to do well. He can find the distractions within the classroom sometimes too enticing to ignore and now he responds quite well to reprimands, to

getting back on task and he's a bit more efficient now in getting back on track than he was originally. [Mr King]

As far as ignoring other behaviour is concerned that's starting to happen a little bit more which is resulting in him being on-task, a bit more focused and determined and naturally improving a little bit more in terms of Performance. [Mr King]

He has expressed and demonstrated a desire to achieve. Always submitting homework tasks, always completing class tasks and this is only in the last couple of weeks and that he has been showing his initiative to do the right thing. ...I've never had a parent/teacher interview with mum, but he came and saw me two days ago and said 'Miss, may we have a parent/teacher interview with you tonight?' So I think it's showing that.

And I think he's also showing a much deeper commitment to learning [Attitude and Effort]. A new addition to the class (and often there's another one that can lead him astray) and he's actually moved himself to another seating position in the class to get away from that because he was getting in trouble for being engaged in off-task behaviours. So he's shown a commitment to learning to do that. [Ms Young]

Mr Brook sees the potential in the EISIL strategies to improve learning for this student by helping to increase his self-confidence and resilience to peer pressures:

emotional intelligence strategies especially about *self-awareness*, *self-regulation*, *motivation*, they're the sort of things that are going to make him start to realise 'I'm okay as I am. I don't need to go looking for mates, I don't need to be compliant to be a mate, I need to just be aware that I'm okay and be happy as good as I am.'

In email correspondence later in the year Frank felt that he had grown further in terms of Managing Emotions building upon the strategies he learnt in EISIL to enhance his learning.

Since learning about the EISIL, I have become half aware that my emotions can affect my learning. I have become able to identify my emotions for example: I passed my PE test so I recognised my emotion and it was my birthday and I felt happy. My ability to

identify these emotions has enabled me to try to manage my emotions for example: think happy as if I passed all my tests. To Manage Others' Emotions I have seen Miss in a bad mood so tried to be the best I can.

It appears Frank is facing the challenge of peer pressure and the tension between wanting to 'get on with friends' and a desire to focus and learn. He has used Recognising Others' Emotions to engage with his teachers and readily accepts redirection from them. It also appears he has used *self-control* and initiative to change his seating position in class to reduce the chances of needing to manage a disruptive impulse or experience Emotional Hijacking. His teachers noted improvements in his Attitude and Effort and he continues to use strategies he learnt in EISIL.

*Summary Table Impact of EISIL: Frank*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>		✓			
<b><i>Self-Control</i></b>		✓		✓	
<b><i>Motivation</i></b>		✓			✓
<b><i>Empathy</i></b>					
<b><i>Relationship skills</i></b>	✓		✓		
<b><i>Attitude/Effort/Performance</i></b>		✓			✓

## **Gene and EISIL**

Gene sees himself as being *self-aware*, having *self-control* and being empathetic. His teachers view Gene as having *self-control*. He requires coaxing and is not challenging himself. He is tolerant of other students and empathetic with the teacher. He depends on certain others or is selective in his relationships and has a confident relationship with the

teacher. His Attitude, Effort and Performance are variable — from lazy to working fairly well and from an 'OK' Performance in one subject to sound results in another.

Gene used the language of EISIL with remarkable fluency in his interview. He has used the Delaying Gratification strategy to Manage his Own Emotions:

I remember the Delay in Gratification and not always go straight at it, get my reward.

If you leave it off for a bit it might get better and even if it doesn't you still get it, so...

While Mr King and Ms Garland did not see any real change in Gene following the implementation of EISIL, Mr Brook and Ms Young observed some changes in his *relationship skills, motivation* and Effort, and *empathy*:

...I think he's had a little boost of confidence or something, I'm not sure what it is but he's quite full of himself at the moment. He always has worked constructively with others and I've been watching that. He seems to be doing that a little bit more. So that peer group relationship where they sit down and work together on problems in [this subject area], that's sort of been good but maybe a little bit better. So he might just be taking that on board a bit how we help our peers and vice versa... [Mr Brook]

Gene has definitely shown the *empathy* Emotional Intelligence competency in that he's Recognising Others' Emotions, often supporting other students when they give an answer in class discussion or kindly disagreeing but in a positive way. His friendship group is somewhat limited compared to others in the class, but from what I thought at the beginning of the year it was impacting on his learning but he's definitely grown more competent in the past few weeks in terms of his own abilities. So I can see some *motivation* to succeed and to do well coming through in his assessments and in class work [Performance]. [Ms Young]

Gene has implemented EISIL strategies in two subjects according to his teachers' perceptions. In Mr Brook's subject, Gene has had increased engagement in group problem solving. Ms Young saw an improvement in *motivation* and in *empathy*— he was encouraging

others' abilities and creating and maintaining rapport so that people felt safe to talk freely. While Mr King did not see any immediate changes in Gene as a result of EISIL, this teacher does see value in EISIL strategies for this student as he increases focus in class and allows himself to be engaged at a deeper level:

in terms of finding ways to allow himself to be more focussed [Attitude and Effort] and motivated. I think he does get through work quickly but is then finding another way for him to be more engaged at a deeper level and wanting to be more inquisitive and not just taking content or concerns at surface value and going 'oh that's it and that's all there is to it'. It could potentially help him in finding a desire and a drive to ask more questions to delve deeper into what's being discussed or studied. And as a result the Performance will increase as well.

EISIL appears to have raised Gene's consciousness about managing his relationships with others for effective learning. His acts of encouragement in group problem solving will strengthen his neural pathways for improved learning and those of others as they participate in a positive collaborative learning experience. Students may experience 'Flow' in this learning environment, where they feel safe and feel they are contributing the challenge of the task. Mr King feels EISIL has the potential to assist Gene to engage in tasks at a deeper level through its consciousness raising strategies to Recognise Emotions and enhance Motivation.

Summary Table Impact of EISIL: Gene

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b>Brain Bits</b>					
<b>Self-Awareness</b>			✓		
<b>Self-Control</b>	✓				
<b>Motivation</b>		✓			
<b>Empathy</b>					✓
<b>Relationship skills</b>	✓		✓		
<b>Attitude/Effort/Performance</b>		✓			✓

### Harry and EISIL

Harry sees himself as *self-aware* and with strong *self-control*. He views himself as empathetic to others. Two of Harry's teachers agree, viewing him as having *self-control* and two view him as having limited *self-control*. They all see, however, that he requires coaxing and is not challenging himself. He is tolerant of others and empathetic towards the teacher. He is dependent on certain others in his relationships with others and has a confident relationship with the teacher. In only one subject is he performing to his perceived potential. Initially, Harry felt he had used some EISIL strategies in his learning. However, he was not able to name them. Later in the year the student emailed me and shared these comments:

Since learning about the EISIL, I have become consciously aware that my emotions can affect my learning. I have become able to identify my emotions. For example one time at lunch I had a fight with one of my friends and I was able to identify my emotions...after I had my fight I was able to then do my work. One time in class I was able to manage [my teacher's] emotions by doing my work to the best of my ability.

Harry's teachers endorsed his new view of his Emotional Intelligence capabilities. Mr King Mr Brook and Ms Young identified improvements in Harry's response to redirection, encouragement of other students to get back on task and a more supportive standpoint in his peer relationships:

He has got pretty good *relationship skills* and can be quite aware of what everyone else is going through as well as himself. So he's quite, very *self-aware*. [Mr King]

This guy is a nice young bloke but he's off-task a lot and I guess what I'm seeing here is more prompt compliance to classroom management that we require. He's on-task more often. [Attitude and Effort] Things like they'll lean back in their seats. Well I could tell him before: 'don't do that, it's dangerous' and it might take 10 minutes before he'll actually stop doing it. Well it's fairly prompt now so we have seen a little bit of benefit there. [Managing his Own Emotions] [Mr Brook]

He will make sure students around him aren't off task so that he can get his work done.

He is willing to help other students. [*relationship skills, self-control*] [Ms Garland]

he has always been aware of managing others emotions in terms of both the teachers and peers around him. I think if anything he's gained from this is definitely relationship skills. He has been involved in some instances of putting other students down and I haven't seen any evidence of that in the past couple of weeks which is really nice. [Ms Young]

As with Students Frank and Gene, a teacher commented on the value of continuing with EISIL for Harry:

Generally he has a fair bit of *empathy* so he's been good with other students that he's with. And he sort of drifted off that a little bit. So I'm hoping now some of the strategies and main tenets of the EISIL ... he may start to think a bit more deeply about what he's really doing. Because I think it's been a bit superficial for this guy. [Mr Brook]

According to three of his teachers, Harry has improved his Attitude and Effort, reflected in on-task behaviours and compliance with teacher directions. His *relationship skills* have improved leading to enhanced interpersonal effectiveness. At first, Harry could not label the EISIL strategies he was using, yet over time he realised he was managing his own Emotions more effectively and also saw the value in trying to manage his teacher's emotions for better learning. Harry appeared to be 'changing the way he thinks' and continued to strengthen the neural pathways that would assist in improving his learning.

*Summary Table Impact of EISIL: Harry*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>	✓	✓			
<b><i>Self-Control</i></b>			✓	✓	
<b><i>Motivation</i></b>			✓		
<b><i>Empathy</i></b>					
<b><i>Relationship skills</i></b>				✓	✓
<b><i>Attitude/Effort/Performance</i></b>			✓	✓	✓

### **Indi and EISIL**

Indi sees herself as *self-aware* and with strong *self-control*. She views herself as empathetic to others and likes to work in a group. Indi's teachers view her in different ways. Mr King and Mr Brook see her as requiring direction in class. Ms Garland and Ms Young find her to have *self-control* and all agree she has *empathy* for other students and a comfortable relationship with her teachers. She works well in class, yet lacks confidence and can struggle with the work.

Since experiencing EISIL, Indi shared that she has used Recognise Others' Emotions to assist her learning:

I take notice more of the teacher's emotions than what I did before. If a teacher was angry and you needed to talk to them, then you could see that they're angry so then you tell them that you can come back later when they're in a better mood. So if they're in an angry mood, then I know that I actually have to be good, I suppose.

Ms Garland notes Indi *motivates* other students around her and Mr King, Mr Brook and Ms Young support the view that she has developed her Emotional Intelligence stance. Mr Brook has perceived Indi metacognitively reflects on her motivation to complete a task and Ms Young has enjoyed Indi's newly learnt ability to delay gratification that has afforded her time to support other members of the class.:

So when you look at her she's the sort of person who will be almost cogently and cognitively sort of thinking 'I'm on *self-regulation* at the moment and I'm directing my behaviour to do this work and get it done now and pass, Mr...'. That's what she's like.

[Mr Brook]

Can be *empathetic*, depending on her mood. [Mr King]

Indi often can have some difficulty in Managing her disruptive Emotions and Impulses. She often asks questions and they are valid questions and they are great questions but at the wrong time. So it's been nice the past couple of weeks for her to demonstrate to me that if she does have a question she'll suddenly put her hand up and then if she can see that I'm 'not right now' she'll stop and she'll wait until another time when the rest of the class is completing some work and there's a time for her and I to interact, one-on-one. I really hope I can encourage her to continue this because she's been doing it quite successfully. [Delaying Gratification] [Ms Young]

Indi has been able to Delay Gratification of an immediate response to her questions and Manage her Emotions to focus on tasks [Attitude and Effort]. She appears to have

metacognitively reflected on the value of Delaying the Gratification of an immediate response to a question – that could be compromised by a teacher's divided attention – to waiting for the answer, with a teacher fully focussed on her. She has also used EISIL strategies to manage her teachers' emotions to get the desired results from them and maximise her learning.

*Summary Table Impact of EISIL: Indi*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>					
<b><i>Self-Control</i></b>					✓
<b><i>Motivation</i></b>					
<b><i>Empathy</i></b>	✓	✓	✓		
<b><i>Relationship skills</i></b>				✓	✓
<b><i>Attitude/Effort/Performance</i></b>			✓		✓

### **Jacqui and EISIL**

Jacqui sees herself as very *self-aware* and with strong *self-control*. She views herself as very empathetic to others and likes to work in a group. Her teachers also view Jacqui as composed with *self-control*. She is self-directed and empathetic towards other students and towards the teacher. She is selective in her relationships, and has a mature relationship with the teacher. She has outstanding results [Performance].

Using the EISIL strategies helped Jacqui to focus on her learning:

I found the Emotional Hijacking interesting actually. And that also made me a bit more aware of, if I got emotional, just to not let my emotions take over me, just to sit

down and think over what I've seen...like, if a teacher — sometimes when teachers are cranky they kind of put you in a cranky mood as well and then you just sit down and feel like you relax yourself, think clearly and be able to work properly.

Jacqui Managed her own Emotions by Reappraising them and invoking the Meditation/Mindfulness strategy thereby preventing her limbic system overriding her neo-cortex. The ability to label her emotions as an Emotional Hijack appears to have empowered her to 'change her thinking'. She employed the EISIL strategy of Meditation/Mindfulness to promote a dialogue between the neural pathways of the limbic and cognitive systems: 'relax yourself, think clearly and be able to work properly'.

Teachers were divided in their feedback about the value of EISIL for Jacqui. Mr King and Mr Brook viewed Jacqui as always being very self-controlled, very self-motivated, very empathetic but as benefiting from being able to invoke the language of EISIL and explicitly recognise Emotional Intelligence competencies:

she's possibly only now learning what she already knew but didn't know what it was.

So with EISIL she's probably employing all of these [strategies] — *self-awareness, self-regulation, empathy, direction [Motivation], self-control, relationships*. [Mr Brook]

Ms Garland and Ms Young, on the other hand, saw a remarkable change in Jacqui in terms of her *motivation* and development of *relationship skills*:

Jacqui has really changed in the last 7 or 8 weeks that I've had her in the classroom. At the start of the year she was sort of coasting, wasn't really working to the best of her ability. [Now she's] really answering questions, talking about things, reading into information that we're doing, was able to help other students. Really took on, not a leadership role, but within her group of students she knew what she was doing. [Ms Garland]

Jacqui has demonstrated her ability to develop *relationship skills* with others. She was quite isolated. She had a lot of friends at the beginning of the year [but a relationship with a student outside the class was impacting on her friendships within the class]. She

became quite isolated in the past couple of months and in the past really only a week or two has shown some really good *relationship skills* in terms of making new friendship groups inside and outside the classroom and I think that's dealing with other students' emotions as well. So she's able to Manage Others' Emotions.

While teachers suggested that continued use of EISIL strategies had the potential to improve learning behaviours for Frank, Gene and Harry, in this case a teacher suggested that Jacqui could use EISIL for other people's benefit:

because she's the sort of person who could slip a couple of words or a sentence in that vein to make other students realise, wait a minute you haven't thought about this, you need to think about this, what is your action going to cause, what's the consequences on that occasion. [Mr Brook]

This confidence in Jacqui's emotional stance is reflected in her own comments. Later in the year Jacqui emailed to report her use of EISIL in her learning:

I have been able to identify the impact of my feelings on my learning [*self-aware*] and how to control [*self-control*] them. I have been able to obtain the ability to leave my feelings outside of the classroom so that I can concentrate [*motivation*] on my work. I have also learnt to deal in different ways with teachers depending on their emotions [Managing Others' Emotions].

With EISIL I have learnt how to control my emotions to a degree where it will not affect my learning (if I was feeling upset, I would stop thinking about it and deal with it after class). I also try to help my fellow classmates when their emotions are out of control and this is affecting my learning and the teacher's mood (If they are being noisy or rude I will try to make them stop, if they are sad I will try to comfort them).

I have learned to take deep breaths if my emotions are out of control and to just close my eyes [Meditation and Mindfulness] and think about something else so that I can control them at times where they need to be [controlled] (in class, tests etc). I also

have learned to let out my emotions at acceptable times (at home, with friends) after having Suppressed them during class.

Jacqui has 'taken-up' a variety of EISIL strategies and it appears she has embedded them in her learning. By 'changing her thinking' (her neural pathways) she has been able to control her emotions and 'leave my feelings outside of the classroom'. She has invoked Meditation and Mindfulness to help control her emotions in class. She admits she still has those emotions and is now able to Suppress them in class and will share them at a more appropriate time and place. She has influenced other students' and her teachers' emotions to enhance learning for herself and the whole class: 'I also try to help my fellow classmates when their emotions are out of control and this is affecting my learning and the teacher's mood'. EISIL appears to impact on individual and whole class learning.

*Summary Table Impact of EISIL: Jacqui*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>	✓				
<b><i>Self-Control</i></b>	✓	✓	✓		
<b><i>Motivation</i></b>	✓			✓	
<b><i>Empathy</i></b>					
<b><i>Relationship skills</i></b>	✓			✓	✓
<b><i>Attitude/Effort/Performance</i></b>				✓	✓

## **Kobe and EISIL**

Kobe sees himself as *self-aware* and with *self-control*. At times, he is unsure of expressing his emotions in words. He views himself as empathetic to others but prefers to work individually. His teachers agree that Kobe is aware of his own limitations and is self-directed. They also agree that he internalises his feelings (i.e., he is unsure of expressing his emotions in words). Teachers also see Kobe as tolerant of others but dependent on certain others, and as empathetic towards the teacher within a comfortable relationship. He is diligent, yet struggles with some subjects.

Kobe stated he had used the Anger Management Strategy of Suppression and had increased *motivation* and experienced Flow as a result of EISIL. He said he had worked on his *relationship skills* and Managing Others' Emotions, not necessarily those of teachers but of other friends, students and family.

Mr King and Mr White commented on Kobe's confidence. While Mr King believes Kobe needs more confidence, Ms Garland feels she has seen this confidence develop after the exposure to EISIL:

I have seen his confidence increase. I have seen him become more attentive in class. But I think he's changed a lot in this period of time, just the way he's attacking the class and attacking his work [Attitude and Effort]. [Ms Garland]

Ms Young goes further, perceiving that Kobe has been able to use EISIL to assist his understanding of EI stance, improve his *relationship skills* and improve his Performance:

He has demonstrated some skills in Recognising Others' Emotions. However, he has always had these skills. I think he's been able to give them a label and is more understanding and aware of it now. I would say he definitely was able to Manage My Emotions and I think encouraging other students— he's particularly strong at the moment. He's definitely developed that. ... So he's become much more empowered and confident in his own abilities, which has definitely increased his Performance in assessment tasks.

This student has a physical disability, so the use of the EISIL to enhance his learning experience and Performance by increasing his confidence, assisting him to manage his emotions and improve his relationships is important to note. His teachers have noted that Kobe would undoubtedly appreciate all students and teachers improving their EI skills of *empathy* in terms of accepting his disability and identifying or preventing any discriminatory behaviours in the classroom. If, however, these behaviours do arise the success of EISIL as an effective student resilience building strategy has surfaced in Kobe's response.

*Summary Table Impact of EISIL: Kobe*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>					
<b><i>Self-Control</i></b>	✓		✓		
<b><i>Motivation</i></b>	✓			✓	
<b><i>Empathy</i></b>					✓
<b><i>Relationship skills</i></b>	✓				✓
<b><i>Attitude/Effort/Performance</i></b>				✓	✓

### **Leigh and EISIL**

Leigh sees herself as *self-aware* with *self-control*, yet is unsure of expressing her emotions in words at times. She sees herself as empathetic and likes to work in a group. Her teachers concur, viewing her as using self-preservation and internalising her feelings. She has some *empathy* for other students and the teacher but is selective in her relationships. Her relationship with the teacher is confident. She is not challenging herself and her Performance is below expectation in one subject.

Leigh has used strategies from the EISIL to improve her learning. She has used the Meditation and Mindfulness technique to help her focus and improve her relationships with others:

I haven't really ever meditated like that before so that really helps to clear your head and be happier with other people.

She also has used *empathy* to Manage her teachers' Emotions:

I've decided to start using *empathy* and all that with teachers because I can see they're very upset with some students and yeah, I get a better learning environment out of that, I think.

Ms Young agrees with Leigh's assessment and has seen some significant changes in her *motivation*:

I have seen her recently demonstrating more *motivation* and drive to achieve in class. She really does want to do well and has also developed some really good confidence in sharing her work with the rest of the class which is really nice because she's doing a great job. And I think she's made some really positive choices. It was definitely a conscious decision to try in the classroom. I think that was a really conscious decision of hers.

The other teachers, by contrast, see EISIL as having potential value for Leigh rather than already having demonstrated its usefulness. They mentioned the possibility that EISIL could improve Leigh's confidence, *motivation*, Performance and *relationship skills*:

She's willing to admit mistakes but I think it's more a matter of she needs to be willing to forgive herself if you know what I mean. [Mr Brook]

A bit more confidence building, she needs to be a bit more *motivated* especially self-motivated to do better than the other students that she's with. [Ms Garland]

[She needs to be] taking responsibility and ownership for work that needs to be done and learning the importance of it. As a result I think it would create a notion of success

and then once experiencing a bit more success naturally *motivation* and Performance would step up I think. [Mr King]

She's willing to work with others, but [only] some others [*relationship skills*]. So how far can that go and could that be a case that their lack of emotional intelligence dictates why she won't interact with those students because that's what happens if someone's being nasty or just inconsiderate and unthinking. It's quite a competitive class and I know that she's capable of doing much better [Performance]. [Mr Brook]

Leigh is noted as being quiet student who internalises her feelings, although at interview she readily shared that she has explored the use of Meditation and Mindfulness to deal with how she feels about people. It appears she is also not at ease with students in the classroom that teachers are 'very upset' about. She describes her feeling of *empathy* for the teacher in this situation. Leigh has improved her Performance in one subject and is tentatively exploring the use of EISIL strategies in other classes to Manage her teachers' Emotions and to calm and focus herself. Her teachers see potential for EISIL strategies to assist Leigh to 'change her thinking' and gain confidence in her ability to learn and take a risk in learning with others.

*Summary Table Impact of EISIL: Leigh*

<i>EISIL Impacts</i>	<i>Student Interview</i>	<i>Mr King Interview</i>	<i>Mr Brook Interview</i>	<i>Ms Garland Interview</i>	<i>Ms Young Interview</i>
<b><i>Brain Bits</i></b>					
<b><i>Self-Awareness</i></b>		✓			
<b><i>Self-Control</i></b>	✓				
<b><i>Motivation</i></b>		✓			✓
<b><i>Empathy</i></b>	✓				✓
<b><i>Relationship skills</i></b>			✓		
<b><i>Attitude/Effort/Performance</i></b>					✓

### **5.3.2 Teacher Focus Group**

To provide the reader with a broad picture of the impact of the EISIL intervention the previous section described the impact of EISIL on individual students. In this section the teacher focus group adds dimension to this picture. The teacher focus group mostly talked about the value of the EISIL in a holistic way rather than identifying individual components. In this chapter, their comments are reported relating to the way students used the EISIL strategies and their perceptions of effects on student learning. The next chapter reports teacher focus group comments related more broadly to the value of the EISIL strategies — recommendations for the use of EISIL with particular students, suggestions for the inclusion of EISIL in Teacher Professional Learning (TPL), ideas for enhancing the use of EISIL in the classroom, and a desire to understand more about Emotional Intelligence and Emotional Intelligence strategies to improve learning.

All teachers felt EISIL made an impact on student learning. They have a desire to develop a greater understanding of Emotional Intelligence and EISIL strategies to assist students to label and implement the strategies, and also to assist them to Manage students' Emotions and their Own Emotions in the classroom.

Ms Mahoney and Mr White gave some examples of changes to Attitude, Effort and Performance and in EI competencies demonstrated in the classroom, particularly by boys, after the introduction of the EISIL:

I found the students' response and feedback pretty good as far as certain students have shown less anger in class and more consideration. So there is one particular male student who I have noticed as showing a lot more consideration for me in class. Now he's still being naughty, he's still talking and all that but he is much quicker to respond and he won't be just blatantly non-compliant and confrontational as he used to

be. Having said that I still moved him last lesson but it was a much better case than it often is. So that's definitely working when they think about it. [Mr Brook]

Yes I probably agree. I think, especially for some of the boys, the male students in the classroom, they are thinking a lot more, they're a bit more on task. I think probably one of the ones I was looking at was the *self-regulation*. I think they're looking at — I don't know whether they just think 'this is not worth my time to play up and do the wrong thing', but they're actually I think trying to stay more on task and try a bit more. [Ms Garland]

These teachers reiterated the noticeable effect of EISIL on the male students when they made the following statements:

Planning better, I think the boys have been the stand-out for me about the effect of it as far as it's sort of patently obvious with some of the boys [that they have taken up some of the strategies]. [Mr Brook]

Yes I think they plan their time and plan what they're going to do in the lesson a bit more thoroughly than what they would normally do when they come into the classroom. [Ms Garland]

The value of EISIL to boys is important, given the adolescent boy brain is still developing planning and decision-making capabilities until the mid-twenties and possibly later. EISIL emerges as assisting in developing neural pathways in the decision-making part of the brain, the pre-frontal cortex: '[the boys] plan their time and plan what they're going to do in the lesson' and 'planning better, I think the boys have been the stand-out for me about the effect of it [EISIL].

EISIL has also had some impact on Anger Management capabilities for boys: 'certain students have shown less anger in class', 'he won't be just blatantly non-compliant and confrontational as he used to be' and 'this is not worth my time to play up'. A great deal of a LaST's time is assisting teachers to plan for students with additional learning needs in the

area of behaviour. In my experience Anger Management is one of the key areas to be addressed to manage boys' behaviour (and in some cases teachers' behaviours). The de-escalation of confrontation is a key outcome of Anger Management strategies in EISIL.

Mr Brook clarified the benefits of EISIL for students who have loss of focus in class leading to some sort of behavioural misdemeanour:

Of course we all agree that the students who have behavioural sort of disturbances are more likely to benefit from this because they can put everything in context and start to get things a little bit more balanced.

The teachers perceived that directing a student to a strategy in the EISIL or invoking the use of a strategy for themselves can improve the learning opportunities for all:

If they have a bad morning, if they're hungry, if they've had a fight with somebody, if someone's just broken up with them, it's always going to affect their learning and how they interact with other students in the class and in the playgrounds and that's the other thing too, [Managing their Emotions] is probably not only improving their learning it's improving their life skills as well. [Ms Young]

But I also think Managing Others' Emotions a really good one depending on how I am in the classroom. Or even as a Year Advisor or just any teacher in the playground with a student who's having troubles with another teacher being able to say 'how are you managing your emotions, are you managing it in a positive way or are you just butting up against that teacher?'. [Mr King]

And you only need one student to disrupt it for everyone anyway and if you're going to be, for lack of a better word, insensitive to that one especially when you're trying to manage the whole class anyway, just picking that fight with that being the wrong fight to pick, can quite easily escalate and everything just becomes messed up and just because you've been unaware of, just haven't shown that awareness to a certain emotion that a child may not even be displaying but they're just internalising it themselves, and it could just be the last straw sort of thing, and that basically ruins the

whole class for everyone if one of them has a big blow out. Perhaps Emotional Hijacking is too strong, perhaps, but however, for some students it might be a really good word. Just the connotation of Hijacking is interesting in our day and age in our context. I think one like Delaying Gratification, I know there's certainly students in this Year 9 class who cannot wait to ask a question that has nothing to do with what we're talking about or it does but it's just not an appropriate moment. I think Delaying Gratification is definitely something that I'll use in my classroom to say 'you don't need to do this right now'. [Mr King]

The teachers generally agreed that an acknowledgement by the teacher of the student's emotions rather than behaviours may save a 'big blow out' in the classroom. Putting emotions 'squarely on the table' as important in learning enabled teachers to 'call' students on their behaviours. 'If they've had a fight with somebody, if someone's just broken up with them, it's always going to affect their learning' and a teacher could ask 'how are you managing your emotions?' They felt if students were familiar with an EISIL term (that is, it is embedded in their neural pathways) a teacher 'calling' the student on an exhibition of Emotional Hijacking or suggesting they Delay Gratification of the answer to a question could defuse a potentially confrontational situation.

## **5.4 Conclusion**

Although there were minor variations, in both students' and teachers' reporting of changed behaviours after the EISIL intervention it should be noted that all students and all teachers reported positive changes and improved perceptions of student learning behaviours. Every student admitted some benefit of EISIL and every student had a least one 'take up' of an EI strategy or a change in an EI capability endorsed by a teacher.

The data analysis shows that students and teachers perceived that EISIL had an influence on student learning. The strategies assisted students to identify and Manage their Emotions to stay focused on learning. They helped students to improve their *relationships* with other class members and with their teachers. Improvements in students' Attitude, Effort and Performance and in their demonstration of EI competencies in class were identified by both students and teachers. The strategies that appeared to be most valuable to students individually in the classroom were the managing emotions' awareness of Emotional Hijacking/Delaying Gratification, Empathy/Managing Others' Emotions and Mindfulness. These improved competencies in individual students were valued by teachers and they also highly valued the improvements in students' Empathy and Relationship Skills in the classroom.

Both students and teachers used the terminology contained in the EISIL to articulate the way students demonstrate EI competencies and use the EISIL strategies in their learning. When discussing EISIL in their focus group, teachers identified that familiarity with the language of EI would be valuable for all teachers so they could recognise and understand the students' perspectives as well as support them in implementing the different strategies. Two teachers remarked that male students had benefitted particularly in terms of increased *self-control* to stay on task.

While Chapter 5 has focused on individual students, Chapter 6 focuses on individual strategies and competencies. It describes the extent to which students and teachers engaged with each EISIL strategy and the perceived effects of each strategy on students' learning. The chapter also includes a summary of teachers' recommendations for future implementations of EISIL.

## **Chapter 6: Findings: Impact of EISIL — use of strategies and EI competencies**

### **6.1 Introduction**

This chapter discusses the way different parts of the EISIL and different EI competencies were used by participants and how they perceived their engagement with EISIL. The discussion reports their reflections and how, as one informant stated, they appear to be 'thinking about their thinking' which ultimately facilitated them to think or do in different ways within their classroom. Some students were already using some of these strategies and are now able to label them, adding to their power and effectiveness. From a neuroscientific perspective, this 'taking up' of EISIL could result in improved learning as a result of exciting the students' brain cells and changing neuronal pathways, leading to suitable emotional responses in the limbic system to support and augment cognitive learning. It is obviously beyond the scope of this study to examine participants' brains to see if their use of EISIL strategies and EI competencies does 're-sculpt' their brains. The data presented are from an educational practitioner's perspective, and demonstrate that engagement with EISIL results in perceived changes in students' Attitude, Effort, Performance and EI competencies (see Figure 2).

The EISIL scaffold (Appendix B and Chapter 3) and Table 1 provide the framework for the presentation of the findings. For each EI competency and related EISIL strategy, a summary of participants' descriptions of the perceived impact on learning is combined with simple descriptive statistics showing the extent of reporting of these perceptions. The percentages are calculated from the aggregated post-EISIL-implementation data, examining the frequency of use of EI competency, EISIL strategy, Indicators of Learning (A, E and P) by 12 students and then, supplemented by the percentage of teachers perceiving improvement in an EI competency or 'take-up' of an EI strategy or improvement in A,E or P. Illustrative

examples of the 'take-up' of EISIL by students are included to show the range of these perceptions. Feedback from the teacher focus group related to the value of EISIL and suggestions for its enhancement close the chapter.

A summary table of student 'take-up' of EISIL strategies follows, for the twelve students in Action Research Cycle 2. The students are represented by the first letter of their name.

**Table 5: Post-EISIL-implementation data**

<i>EISIL strategies</i>	<i>Student Interview</i>	<i>Teacher A Interview</i>	<i>Teacher B Interview</i>	<i>Teacher C Interview</i>	<i>Teacher D Interview</i>
<b>Brain Bits</b>	B				
<b>Self Awareness (Recognise my Emotions)</b>	D HJ	D E F H L	C E G	C D	C
<b>Self Control (Manage my Emotions)</b> <b>Emotional Hijacking</b> <b>Delaying Gratification</b>	A B C D E G J K L	A B F J	A B F H I J K	A F H	B C D I
<b>Self Control</b> <b>Anger Management</b>	BK		A		
<b>Motivation</b> <b>Mindfulness/ Meditation</b> <b>Flow/Optimism/Resilience</b>	A B D E J K L	B E F G L	A F H	A B J K	A E F L
<b>Empathy (Recognising others' emotions)</b>	A C E F L	B E I	B H I	F	A B G K L
<b>Managing others' Emotions</b>	C F G I	B			D
<b>Relationship Skills</b>	D E F G J K	E H	C F L	E I J H	A B C D E G H I J K
<b>Potential of EISIL</b>			A D F G H J K L	D	I
<b>Attitude</b>	A	G	B E I	C J	A B G K
<b>Effort</b>	A B D	D	A D E F H	A H K	A D I J
<b>Performance</b>	B D	A	D E F H	C H K	A F H L

## **6.2 'Brain Bits' from the EISIL**

### **6.2.1 Impact of EISIL 'Brain Bits' on learning**

Only one student actually commented on the 'Brain Bits' at interview. However, during the delivery of EISIL the students indicated they had an understanding of the structure of the brain, yet had not considered how their brains actually 'learn'. They had little knowledge about where their 'emotions' and emotional reactions came from. All appeared to comprehend and accept that the experience of EISIL was designed to help them 'think about their thinking' during the learning process (Metacognition).

### **6.2.2 Take-up of 'Brain Bits'**

Students appeared interested in the structure of their brains during the EISIL lessons. Some students recalled science lessons on the topic of the brain. They expressed surprise at the power of the amygdala to trigger the fight or flight response to situations and at the prospect of being able to 'change the way they think'. A student summed up this possibility by describing the use of an EISIL strategy as a 'subconscious' act. She recognised a 'fight' response in a tense situation with a teacher and was able to invoke the EI strategy of Delaying Gratification to manage the situation successfully. She was able to see the longer-term benefits of preserving a relationship with the teacher by negotiation (rather than demanding immediate satisfaction) and concurrently optimising her desire to work with friends. She was also able to identify her unproductive learning behaviours after exposure to EISIL by reflecting on how EISIL strategies could be used to do things in a 'better way' to avoid trouble with the teacher. She cited the term Brain Plasticity and made reference to its ability to 'change the way we think'. She seemed delighted that she could summon this term to describe her thinking.

## **6.3 EI Competencies and related EISIL strategies**

### **6.3.1 Impact of EISIL Self-Awareness and Self-Control strategies on learning**

The personal EI competencies of *self-awareness* and *self-control* were mentioned by 83% of students in the context of Managing their Own Emotions and Managing Others' Emotions. A variety of benefits have accrued to students as a result of increased student Management of Emotions, *self-awareness* and *self-control*. These benefits include recognising the value of suppressing negative feelings and/or outbursts and responding to teacher redirection without anger. Students were introduced to the Emotional Intelligence strategies to manage disruptive emotions and impulses. EISIL examined different ways of managing disruptive emotions. Students were presented with terminology that helped them 'label' their emotional reactions to situations. Using the terms Emotional Hijacking and Delaying Gratification assisted students to label their 'thinking' and employ strategies to manage their emotional response. Students were able to select and use a technique to suit their own learning situation.

Teachers were appreciative of the effect EISIL had on students' abilities to Manage their Own Emotions. Impacts noted by students and teachers included improvements in confidence, increased focus in class, greater *motivation* (Attitude and Effort) and better test results (Performance).

### **6.3.2 'Take-up' of Self-Awareness and Self-Control strategies**

Three quarters of students (75%) self-reported that EISIL improved their ability to recognise and Manage their Emotions to enhance learning. Half the students had two or more teachers ( $\geq 50\%$ ) observing this change. Two students (17%) had three (75%) teachers observe the change. Two students (17%) were described by their teachers as already exhibiting this EI capacity with a teacher assessment of 'excellent' self-control. A variety of exemplars is

presented to illustrate how students 'takeup' these strategies and the perceived impact they have on Attitude, Effort and Performance.

### **6.3.2 (i) Self-Awareness**

Cale reflected upon his new ability to 'notice other people's expressions'. The skill of Recognising Others' Emotions appeared to have helped Cale engage with other students more effectively and also with the teacher. Three teachers (75%) noticed his increased focus on the teacher's expressions to enhance his listening skills. Cale has been observed reflecting on his awareness of how he relates to other students. He is perceived to be considering what he thinks about himself and others and how this may affect his learning. Mr Brook had observed the student engaging more with others, rather than being aloof and projecting indifference. He felt the student could see how the improvement in his *self-awareness* and its reflection in improved *relationship skills* could assist his learning. Two teachers remarked that Cale had an increased *self-awareness* manifested in increased confidence to ask questions. These enhancements in Attitude and Effort were accompanied by improved Performance in two topic tests.

Dana feels she has become more *self-aware*, thinking about her own emotions and her reactions to others' emotions. This change has enabled her to stay focused on her own work and not be as reactive to those people she does not particularly like. She explained that Recognising Others' Emotions (giving those emotions a label) and then labelling her own gave her more control over her own concentration and persistence (Attitude and Effort). Ms Young commented on this change in Dana's *self-awareness* and how it has had a positive impact on her Performance in class. The student's ability to identify the intentions of other students by giving them a label has increased her confidence to work with her peers. Her performance has improved because she is reading peer relationships more clearly and this has increased her resilience.

Frank's increased *self-awareness* has helped him to recognise that a teacher's 'pulling him up' on something is a positive redirection for his learning. Mr King has seen an improvement in Frank's ability to return to task following teacher direction and thus an improvement in his Effort.

### **6.3.2 (ii) Self-Control strategies**

Aaron claims he has been able to Suppress the desire to 'muck around' in class; this perception was supported by Mr King who noted Andrew's stabilising influence in class. Teachers A and B have both seen changes in Andrew's Management of Emotions and his improved Attitude and Effort in learning. Andrew is also moving towards an enhanced Understanding of the teacher's Emotions by Reappraising his anger, listening to the teacher and showing *empathy* towards what the teacher is trying to do in class.

Bree declares she has been able to Reappraise the consequences of her emotional responses in class. Mr King endorses Bree's view of her improved emotional intelligence stance, perceiving that she has been more receptive and cooperative in class. This improvement in Attitude and Effort were noted after the EISIL. Mr Brook also notes an improvement in Bree's *self-control* in response to teacher redirection to focus on the learning task. Ms Young credits EISIL with Bree's increased ability to Delay Gratification and to resist the temptation of asking questions designed to divert and sidetrack the rest of the class. She has reduced her need to be a centre of attention and appears to be more respectful of her peers. Bree claims her ability to deal with her sport choice situation was powered by her knowledge of the EISIL Anger Management strategy of Assertiveness not Aggressiveness.

Frank, Harry and Indi have also been able to improve their management of disruptive impulses. Ms Garland views Frank as having difficulty in Managing his Emotions. However,

after EISIL, she has noticed responsiveness to teacher direction as has Mr King who has seen an improvement in response time to a reprimand. Mr Brook attributes to EISIL the change in Harry's receptiveness to teacher direction from an increased level of *self-control*. He is now responding to teacher redirection promptly. This change is echoed by Ms Garland who has noticed Harry using the Distraction strategy 'in reverse' by removing himself from situations where other students are distracting him. Ms Young notes Indi had some difficulty in Managing her disruptive Emotions and impulses. She often asked great questions but at the wrong time. She is a high-performing student and can now 'hold that thought' by Delaying Gratification. She will now put up her hand, wait for the teacher's cue and know her question will be answered in due course with the teacher's full attention.

Gene has also used knowledge of Delaying Gratification to manage his desire for immediate rewards and 'not always go straight at it' realising that 'if you leave it off for a bit it might get better and even if it doesn't you still get it!'. His understanding and application of the outcomes of the 'Marshmallow test', featured in EISIL, reflected an improved Attitude in class. Mr Brook feels Gene's newfound *self-control* has increased his self-confidence.

Using the EISIL strategies helped Jacqui to focus on her learning. She metacognitively considered her reaction to her teacher's emotions, labelled what she was thinking as being an Emotional Hijack and then chose to Manage her Own Emotional response. The adoption of this EISIL strategy enabled her to 'think clearly and work properly'.

While not strictly in a classroom situation, two students have found EISIL strategies have helped with situations at home and school. Bree found Delaying Gratification was effective in managing some family relationships and Kobe has used the EISIL Anger Management strategy of Getting Help to manage his emotions and deal with an emotional situation.

It is not only students who struggle with Managing their Emotions to 'stay on task' who have been helped by EISIL. With teacher help to deconstruct a situation in classroom relationships Dana was able to Manage her Emotions and not let a possible emotive situation threaten her high level of academic Performance.

### **6.3.3 Impact of EISIL Motivation strategies on learning**

A substantial majority (67%) of students self-reported that an EISIL strategy had helped increase their motivation and had at least one teacher indicating an EISIL Motivation strategy had impacted positively on their learning. Thirty-three percent of students had more than one teacher confirming this view. The contribution of Flow, Mindfulness and Meditation strategies to students' Emotional Intelligence Stance is noteworthy as it appears to have an impact on Attitude. The descriptors students used for their emotions, such as 'bounce back', 'clear your head' and 'be happier with other people' indicate strengthened student Resilience and Optimism for better learning. Two students identified in 'Confidentials' as high- performing and 'Emotionally Intelligent' note the contribution of EISIL to augment their already successful learning. These two students are representative of the 67% of students who self-reported using these strategies. It is interesting to note during EISIL delivery, the metaphor of 'seeing the world as a glass half-full rather than half-empty' appeared to appeal to students' imaginations.

### **6.3.4 'Take-up' of EISIL Motivation Strategies**

Andrew self-reported an increase in his *motivation* since experiencing EISIL and all teachers confirmed this perception. He reports he has found it easier to concentrate in class and his teachers indicate he is asking questions, contributing to class discussion and is attempting tasks (Attitude and Effort). Ms Garland now views him as wanting to work. Mr Brook adds force to this view of the impact of EISIL in terms of improved Performance: 'I think he's

achieving more outcomes in class.' Mr Brook is also very happy with the change in Bree's *motivation*, work and cooperation.

Frank has shown an upturn in motivation and has signs of progress in Attitude, Effort and Performance. Mr King and Mrs Young have been very pleased with Frank's initiative to improve his academic Performance. He is now submitting homework tasks, completing class tasks and requesting a Parent/Teacher interview. Gene has developed a better Attitude and improved his Effort in the classroom. Ms Young observed the change in Gene's Performance coming through in his assessment and classwork.

Students identified as higher-achieving students in the Action Research Cycle 1: Pilot Study, found that EISIL can still enhance Attitude, Effort and Performance. Similarly, Emma and Jacqui, already recognised as 'good students', have boosted their performance after EISIL in the second Action Research Cycle. They attribute increased drive to the take-up of Flow strategies. Jacqui found she could limit the impact of emotions generated in a difficult classroom management situation by using Mindfulness. Emma used Mindfulness and Meditation 'to tune out' other students' behaviour and focus on herself. Ms Young has noticed a boost in Emma's interest in learning beyond the classroom and Ms Garland has noticed a difference in Jacqui, who while recognised as a good student was not motivated to reach her potential until after EISIL.

Kobe described the value of the EISIL Mindfulness and Meditation exercises and being lost in Flow as helping to 'bounce back'. Kobe believes his motivation has increased and Ms Garland endorses that view, seeing EISIL as the catalyst for this change. Leigh found the Mindfulness and Meditation exercises helped refresh her and had an impact on her ability to relate to others. The meditation cleared her head and helped her be happier with other

people. Ms Young describes the transformation in Leigh as increased confidence and greater willingness to share her work with the rest of the class.

### **6.3.5 Impact of EISIL Empathy and Relationship Skills on learning**

Perceptions of an impact of *empathy* and *relationship skills* were universal — 100% of students reported an increased ability to understand and/or Manage another person's Emotions and/or had a teacher report an improvement in their *relationship skills*. Changes in *empathy* for other students and at home was noted by six ( $\geq 50\%$ ) students. Most students described a change in *empathy* for their teacher or a case of newfound *empathy* for what their teacher was trying to do in the classroom.

The expression 'to put yourself in someone else's shoes' was used to illustrate the concept of empathy. To focus on *empathy* for the teacher was a new experience for students. They 'thought about' and were able to label how their teacher 'felt' in class. This enlightenment enabled them to understand where the teacher 'was coming from' in terms of teaching and learning. It made students more understanding of teachers' frustrations with a student's poor Attitude, Effort or Performance.

The breakthrough from adolescent self-absorption to consideration of another's feelings or standpoint was fascinating to observe. The fact that teachers have emotions, too, was instructive for students and seemed to inspire students to Manage teacher Emotions to optimise their own learning environment.

### **6.3.6 'Take-up' of EISIL strategies of Empathy and Relationship Skills**

Sixty-seven percent of students 'took up' (self-reported) EISIL strategies designed to improve *relationship skills* with their peers or strategies to influence (Manage) their teachers' Emotions. Students have shown greater willingness to listen to their peers' opinions,

encourage their classmates' work ethic and boldly attempt to positively influence their own learning environment. For example:

Harry has significantly improved his *relationship skills* with his classmates. He had previously been involved in 'putting down' other students. After EISIL, he desisted with that poor showing of Emotional Intelligence. Ms Garland observed his improved Attitude and Effort, evidenced by his successful attempts to influence others to remain on task, thereby enabling him to achieve his own personal goal to complete his work. Ms Young indicated Harry has always been aware of Managing Others' Emotions in terms of both the teachers and peers around him and comments on his improved *relationship skills* where instances of putting other students down had ceased.

Aaron, Emma, Gene, Indi, Jacqui and Kobe have been observed honing their peer relationships to improve the learning environment. Ms Young has observed in Aaron *empathy* for other students' emotions. Aaron has been supporting others in their learning, recognising EISIL's mantra of influencing others to achieve personal and group goals. Ms Young notes Emma's increased *empathy* for other students has manifested in a better Attitude in class and Emma's perception of herself is that she tries to influence other students to improve the learning environment:

I tell my friends also, like let them know that he's waiting for us to stop talking and sometimes tell the class as well.

Ms Garland commented on Indi: 'she motivates other students around [her].' Ms Garland was also impressed with a leadership role taken by Jacqui in group work. Ms Young has noticed Jacqui's reduced isolation and connection with others and the skills she has developed to Manage Others' Emotions in the process. Mr Brook has noticed Gene

improving his *relationship skills*, helping his classmates in problem solving. Kobe perceives he has improved his Emotional Intelligence Stance. Ms Young endorses this view:

He's become much more supportive and he's also made relationships with other students in the class who[m] he hasn't had a connection with before.

Ms Young believes acceptance of other students' opinions and responding in class to those opinions has improved the Performance of Bree and Kobe.

Bree has developed skills in Managing her teacher's Emotions by not disappointing the teacher with another late submission of an assignment. Her improvement in Attitude and Effort was perceived as a result of EISIL. Dana, Frank, Gene, Jacqui and Kobe have also found value in Recognising Others' Emotions and trying to manage them to improve their learning. They described their attempts to influence the teachers' emotions, realising this skill for dealing with others helps get desired results and also helps them reach their personal goals of a positive learning environment.

Ms Young noted Dana has always been able to Manage her (Ms Young's) Emotions as a teacher and more recently had observed Dana watching her emotions change as a teacher in response to the behaviour of the class.

Frank described his newfound *empathy* for the teacher:

if they don't look happy I just do my best and go up and ask them if they want anything done for them...It puts them in a bit of a happier mood.

and how it affected the classroom:

they might be a bit harsh on me or take down the class if they're not in a good mood...

Interestingly, Gene describes showing *empathy* for the teacher as a technique to improve the teacher's mood and the teacher's performance:

In the last few weeks when I go into classrooms and the teacher's in a bad mood and you can just use that to calm down, like with the coping with Other people's Emotions and stuff like that and then connecting with them and that...

[Interviewer:] and how would that help your learning?

It makes it a lot easier. So you go in there and they're in a bad mood but then if you cheer them up a bit, by, like 'I know what you're doing', it makes their life a lot easier which makes them teach better and you learn better then.

Jacqui articulates the experience of empathising with teachers and not taking offence if they did not seem 'in a good mood'. She seemed to be able to 'Delay Gratification' of having the teacher's attention until another, perhaps more rewarding, time:

Yeah, well through the EISIL it made me a bit more aware that sometimes teachers aren't just angry at you, they might have some problems out of school. If they're in a cranky mood then I would know just to back off. Maybe if I had something to ask then I could be a bit more subtle about it. So I didn't take it as offence, like it wasn't me making them feel like that...

[Interviewer:] and how does that affect your learning in the long run?

Yeah, it makes me more understanding. It actually helped me a lot because then I would realise 'well I'll just come back in a better day when they're in a better mood instead of making them more upset' which usually helps with the teachers as well I think.

The value of the EISIL to improve *empathy* and develop *relationship skills* can be seen in the teachers' comments regarding Kobe who has a physical disability. Mr Brook feels:

Kobe would be really happy if everybody else used EISIL strategies because that would make him feel a lot better. His life would be much better if other people were considerate, not so unkind, patient and regulated their own behaviour, not to be so

harsh in making judgements and sort of throw-away comments that could be quite deprecating. I'll bet my bottom dollar he's watching to think 'well I hope this happens' because it's going to be better for him if those other people tend to give a little bit of thought to what they're doing and the consequences of their actions.

Ms Young stated Kobe has learnt skills from the EISIL to Manage her (Ms Young's) Emotions and the emotions of other students for an improved learning environment: 'I think he's been able again to give them a label ...I would say he definitely was able to manage my emotions and I think encouraging other students ... He's definitely developed that.' Ms Young highlighted Kobe has been able to use the EISIL to assist his understanding of EI stance, improve his *relationship skills* and improve his Performance in assessment tasks.

The analysis of the 'take-up' of EISIL strategies clearly indicates widespread perceptions by both students and teachers of specific changes in student behaviours. Both teachers and students were able to identify specific strategies and describe their impact on students themselves, on the teachers, and on the classroom learning environment. Teachers' perceptions of the value of EISIL extended to include reflections and recommendations on how the scaffold could be improved to increase even further the impact on student learning. These focus group reflections are described in the following sections.

## **6.4 Teacher focus group feedback**

Feedback from the teacher focus group contained recommendations to incorporate EISIL in teacher professional learning so more teachers could benefit from increasing their knowledge of Emotional Intelligence, suggestions that EISIL might be particularly relevant for particular groups of students, and proposals for ways to improve EISIL to further enhance its perceived benefits.

#### **6.4.1 Recommendations for the inclusion of EISIL in TPL**

Teachers expressed a range of reasons why they perceived that learning about Emotional Intelligence and EISIL would be a useful addition to TPL and would lead to beneficial effects in the classroom learning environment. As well as extending their own learning, teachers mentioned the following perceived benefits: better understanding of their students and of the strategies their students were using to improve their learning; knowledge to be able to label and recognise the strategies used by students; and extending the use of Managing Our Emotions to include teachers.

Mr King remarked about the value of teachers having a clear understanding of EI strategies to assist students in their selection and use when he said:

I think [the strategies] can be quite useful if used correctly or appropriately in terms of teachers having a great understanding of what and how it is implemented effectively and if that is the case then it is easy to recognise and understand the students' perspectives and the strategies they themselves are trying to implement. So I think it is a matter of us having a more in-depth understanding of what's going on and then at the same time more easily identify the measure that the students themselves are going to [implement], if at all, any measures in terms of implementing [them] themselves.

Ms Young concurred that teachers need this understanding to support students and it would also assist teachers to Manage their Own Emotions. If teachers prevented Hijacking of their Emotions by students they would indeed be modelling the use of EISIL for students, as highlighted by the following comments:

No I agree. I think it [EISIL] has really useful strategies. I think it is important for the kids to be able to give labels to the strategies that they are using because there may be that *self-awareness*. It's really good for them to go 'I am trying to use this' particularly for those kids, not that there are too many in the class at the moment, but

particularly for students when they are getting into trouble and they can't identify why they are getting into trouble and they can't identify the strategies that they are trying to implement to remain out of trouble.

Ms Young mentioned the importance of students being able to identify and label their own Emotions to improve their capacity to control (Manage) them. She then shared her thoughts on the value of teachers knowing about emotions, knowing about the notion of Emotional Hijacking and how it can happen to them in the classroom. If the teacher can be seen to be selecting and implementing EISIL strategies, it is positive role modelling of that behaviour for students. Mirror neurons can assist students to observe and 'takeup' those behaviours. She does have a concern that some teachers may either not want to learn about the strategies or feel they cannot use them. She comments:

I think it's really important for teachers to have a good understanding particularly in terms of Managing our Emotions because a lot of the time it can be one student that can change our attitude and whether that's for the day or the rest of the lesson we need to be able to make sure students are not Hijacking our Emotions and that we can implement the strategies ourselves which will have that positive reinforcement for the students that I'm implementing them as a teacher and I think they work and so students can then see 'okay, well, if the teacher is committed to using the strategies maybe I should be as well'. I think it's also really important that teachers accept this as an opportunity for them to develop their skills because I think sometimes teachers may not want to use the strategies, they aren't able to use them themselves and I think for the students to be able to effectively use them it's important for teachers to encourage that use.

In my experience, teachers who have a strong preference for discipline as the prime motivator for changing behaviour might be reticent to 'accept this as an opportunity for them

to develop their skills'. Emotional Intelligence, as has been discussed earlier, is a relatively new addition to the education lexicon and toolkit and by its nature requires the personal touch, whereas discipline can often be administered by another person outside the classroom.

Ms Garland added to the consensus that Emotional Intelligence is an important attribute for teachers. Her belief is that student cooperation can be enhanced through the use of EISIL strategies and her hope is that most teachers are using them, even if they are not aware of them. However, discipline procedures in schools continue to take up valuable teaching and learning time. Sharing a common language of EI and EISIL strategies could assist in gaining student co-operation rather disrespect:

As far as staff goes I think it's pretty important. You'd hope that most teachers were using these strategies even if they weren't aware of them really because the students' cooperation can be heightened with the use of a lot of these strategies. And it also goes back as a two-way street. If the kids feel that I've got consideration and respect for them it's much easier to get that back for themselves. So I find that across the board I think Emotional Intelligence is fairly important for a teacher.

Mr King commented about the value of incorporating EI into TPL to enhance teacher capacity to provide a productive learning environment. He shares his thoughts on the rapidly changing environment facing students today and that teachers need a strategy to assist them to deal with the emotions students may bring into the classroom with them:

I think it [TPL] would be for everyone because no matter who you are or how old you are you're going to continue learning anyway. So it's just a matter of that natural progression that you need [EI] in your teaching and students are always going to be changing at a rate of knots no matter where they are and no matter what environments you find yourself in. You're going to have different emotional issues that different

students are going to show and are not going to be able to cope with them in different ways anyway. So no matter who you are or where you are you still need to be up-to-date I think to create an effective and successful learning environment.

Mr Brook agreed on the benefits of including EI in TPL, indicating staff knowledge of EI may make a difference to the way they respond to their students. He suggests that staff could 'actually target' improving Emotional Intelligence skills in themselves as they arise in class. He implied that targeting EI skills in themselves may make a difference to the way they relate to students. However, he points out, ironically, one may need to have EI to know one needs EI:

Yes that's a good point actually because the first thing is you need emotional intelligence to realise that this is sort of worthwhile, which I know is a bit of a catch 22. However, if you did put out some sort of professional development for staff it's really down the lines of I guess psychology, welfare, all that sort of stuff — counselling which is what you'd expect. But there's a little bit of difference here because if you look at these strategies and things like that, that's where maybe we could actually target those particular things in themselves, like the staff themselves —*self-control, motivation, empathy, relationship skills*. Those things where you are you aware of what's happening in the class. Do you care? Will it make a difference if you change your response to some things? So I think as far as how to actually relate to the students and how to respond to the students would be further facilitated by teachers' learning the particular strategies that are built into this.

These teachers also expressed a desire to know more about current understandings of how Emotional Intelligence and Emotional Intelligence strategies can enhance learning. They share a belief that EI is an important quality in a teacher which suggests suitability for teaching may in the future require assessment of this attribute as well as academic capability. The opportunity for TPL about the role of the emotions in learning, offered by

universities or funded by the employer, could be an option for pre-service teachers and teachers already in schools.

#### **6.4.2 Students for whom the EISIL might be particularly useful**

As well as suggesting that learning about EI would be helpful and useful for teachers, the teachers in this study identified particular students for whom such learning would be beneficial.

Ms Young suggested that EISIL could be valuable for students with disabilities, particularly Autism Spectrum Disorders (ASD). Students on the autism spectrum have some dysfunction in their mirror neuron system, leading to social impairment and lack of understanding of others in the social world. Ms Young commented:

It would be interesting too with kids with different disabilities, whether they're on the [autism] spectrum and how they would use these strategies, whether particularly poor or autistic kids, for them to be able to identify where they're at because a lot of the time they have no social skills and they can't identify how they're feeling, what's going on in their mind and you can actually give a label to it, you know in *relationship skills*, in Managing Others' Emotions and Managing their Own Emotions. So it would be interesting to see it implemented in the future with students with particular disabilities to see if it needed any particular adjustments or if it works perfectly for them as well.

Teaching imitative skills has been shown to be effective for improving imitation ability and the ability to imitate others opens the doors to many other forms of social learning and communication (Bernier & Dawson, 2009). Thus EISIL strategies including developing skills in Recognising Emotions and strengths in role modelling in *relationship skills* could supplement intervention strategies for students on the Autism Spectrum.

Ms Garland remarked that EISIL could assist students who have problems managing their behaviour in the classroom because of their lack of self-awareness. 'Behind every challenging behaviour is an unsolved problem and a lagging skill' (Greene, 2008, pp. 27–34). EISIL cannot solve the 'with whom, over what, where and when' of the unsolved problem, although it can possibly assist in addressing the why of challenging behaviour: a lagging skill. The lagging skill could be difficulty in expressing emotions, managing emotional responses to frustration, uncertainty, transition from one situation to another, empathising with others or appreciating how one's behaviour is affecting other people. Ms Garland commented:

I would like to see it may be directed towards the less able children in the classroom, the students that you constantly have to re-direct with their behaviour because they are not capable of it or they are not quite — sometimes I don't think they are even aware they're doing it. But it's been great looking at some of what the kids are doing now and some of them are quite high achievers and they're great kids and they take it on board. But it would be interesting to see some of those kids that you are constantly [reminding]'be quiet, sit down, do your work, please do the right thing' whether they get [anything] out of it...

Mr Brook pointed out that even a high achiever who had been already identified as using EI strategies benefited from EISIL. As noted in the individual responses to EISIL, students already identified with high EI enjoyed learning the vocabulary to label their existing behaviours and took the opportunity to encourage others in the classroom to increase their empathy for their teachers as a strategy to enhance the learning experience. In Mr Brooks's words:

With the high achievers I have to say there's obviously something happening because I notice with one particular girl who is a high achiever and I notice that she looks at me a lot now, she's thinking. So you can see things just clocking over in her mind. She's

always been friendly and everything like that but I just notice there's that one dimension extra to what I gather is happening there. So she's a young woman who is pretty good with this sort of stuff anyway but obviously I would have previously said 'no, don't bother trying to tell them what the skills are, they won't worry, they understand them anyway' ....

Teachers thus identified a wide range of 'particular groups' of students whom they perceived would benefit from learning about EI — students with disabilities, students from impoverished backgrounds, less able students, and high-achieving students. As mentioned in the previous chapter, half the teachers also perceived a particular benefit in this study for the male students.

#### **6.4.3 Proposals of ways to enhance the effectiveness of EISIL**

The teachers offered some excellent ideas to enhance the implementation of the EISIL in the classroom, including the use of colours attached to each strategy to tap into the 'visual' nature of this generation of students. It would be easier for the teacher to readily identify where the student is coming from if they did not have to articulate it and they were able to actually 'show it'.

Mr King readily acknowledged the benefit of EISIL and offered a strategy to enhance its delivery and accessibility through the use of colour. He suggested that linking emotions to colours may give students a quick way of communicating their feelings to teachers and opening up a conversation. The teacher's wisdom in this idea has merit as it could set up a channel of communication about emotions for those students who have difficulty coping with exposure to scrutiny in class. He describes the process that may provide an opportunity for further discussion that could be arranged for a later time by the teacher and student:

I think in terms of identifying strategies and skills it could be easy for students to associate with it if there were some sort of colour spectrum incorporated. They aren't always able and willing to verbally express and articulate their emotions and how they are feeling and their thoughts. But if they were able to identify a certain colour or image or something like that with a certain strategy or emotion it would be a stepping stone in which to then further engage in conversation because being such a visual generation it's easier or more accessible for them I think and that can lead on to more in-depth discussion or thought processes ... because straight away it acts like a symbol really and the moment that you see a certain symbol or colour which represents something and has some meaning, you don't need to engage and dig further, frustrate students and force them to, in a way, internalise even more and shut off. Whereas it is just that quick split-second recognition and understanding from a teacher's perspective and then a student does not have to go through the whole hassle of having to try and explain or try to think because they may not be in a mood to discuss.

This strategy may reduce the anxiety of many students who have difficulty articulating their thoughts and feelings. The important stepping stone is for students to recognise their emotions in class and using colour as a symbol to share their emotions with a teacher could be just as effective as verbalising.

These ideas augur well for the use of EISIL for mainstream students and students with additional learning needs. The value of the EISIL has been acknowledged by teachers and is being built upon as they reflect on possible enhancements in its delivery.

## 6.5 Conclusion

Teachers and students used the language of EISIL to describe the 'take-up' of the strategies by students and how they perceived it impacted on students' Attitude, Effort and Performance and their EI competencies. After engagement with EISIL students were able to employ a greater range of suitable emotional responses to their own 'thinking' in the classroom, which would support their cognitive learning by enabling them to stay focused and on-task through increased motivation and/or increased ability to resist distraction. Students also showed an ability to initiate a greater range of suitable emotional responses in interactions with peers and teachers. The ability to empathise with other students resulted in greater willingness to listen to and collaborate with their peers. Teachers identified this attribute as supporting cognitive learning and students believed learning was boosted when students displayed greater *empathy* for 'what the teacher was trying to do in the classroom'. In the final chapter, the findings from Chapters 5 and 6 are discussed, answers to the research questions are examined, and recommendations for future research are identified.

# Chapter 7: Discussion and Conclusions

## 7.1 Introduction

This chapter focuses on the findings from using EISIL in the classroom and the relevance of EISIL for teachers, teacher leaders, teacher educators and teacher professional learning (TPL).

The plasticity of the brain provides educators with opportunities to promote the working-together of emotion and cognition to improve learning. In this study awareness of Emotional Intelligence (EI) and the role of the emotions have been shown to be important in learning. The findings demonstrate that the use of EISIL can lead to improvements in Attitude, Effort and Performance as perceived by students and their teachers. Teacher Professional Learning (TPL) in EI may be vital to pedagogy, given the increasing levels of emotional labour experienced by students, teachers and teacher leaders. The impact of the study on the teacher–researcher's professional practice is described and the chapter concludes by reviewing the limitations of the study and recommendations for future research.

## 7.2 The research questions

The question of the impact of Emotional Intelligence Scaffolding to Improve Learning (EISIL) in this study is implicit in the primary research question:

*How do students and teachers perceive the influence of EISIL on student learning?*

Through the analysis and presentation of data in the previous two chapters, this study specifically examined the following sub-questions as they pertain to the research question:

- i) How do students perceive the influence of EISIL on their learning?
- ii) How do teachers perceive the influence of EISIL on their students' Attitude, Effort and

## Performance?

In this study, students selected and implemented strategies from EISIL to Manage their Own Emotions and the Emotions of Others. They perceived that an understanding and conscious application of EISIL strategies changed the way they thought or gave them greater control over their thoughts or emotions. Students and teachers indicated that this control influenced a variety of learning outcomes including improved Attitude, Effort and Performance.

The details that support these conclusions and the specific ways that teachers and students perceived EISIL to enhance learning were presented in Chapters 5 and 6, and will be explored further in the following sections. Every EI competency or EISIL strategy (as shown in Table 5) was mentioned in interview or by email by at least one student and the majority of the competencies/strategies (five of the eight rows in Table 5) were mentioned by at least one third of the students. While results for individual students varied, all students had at least one teacher confirm take-up of a strategy; overall, all teachers noticed beneficial changes in particular students' self-control, motivation, empathy and relationship skills. All four teachers identified improvements in students' Attitude and an enhancement in students' Effort and Performance.

Teachers felt professional learning opportunities for teachers to learn about EI theory and EI scaffolding strategies such as EISIL, to include in their pedagogy for implementation in the classroom, would be valuable to enhance student Attitude, Effort and Performance. Students agreed that teachers could benefit from this opportunity.

### 7.3 Emotions and Pedagogy

As Ford (1992, cited in Meyer & Turner, 2007, p. 147) stated, '[E]motions are not simply motivational "add-ons" or "afterthoughts" — they are major influences in the initiation and shaping of goals and personal agency belief patterns that may seem relatively ephemeral or labile at the level of specific behaviour episodes, but that in fact may be every bit as influential as cognitive processes in terms of enduring motivational patterns'. When teachers fail to appreciate the importance of emotions we may be failing to appreciate a critical force in students' learning. As Immordino-Yang and Damasio (2008, p. 196) asseverate, 'we may be failing to appreciate the very reason that students learn at all'.

My study of EIS scaffolding to support emotional and cognitive learning has followed the recommendations of the Collaborative for Academic, Social, and Emotional Learning (CASEL) that SEL programs should be field-tested, evidence-based and founded on sound psychological or educational theory. CASEL advocates that such programs should be anchored in Emotional Intelligence theory which in turn proposes that four fundamental emotion-related abilities comprise Emotional Intelligence: (1) perceptions/expression of emotion; (2) use of emotion to facilitate thinking; (3) understanding of emotion, and (4) management of emotions in oneself and others. Brackett and Katulak (2007) assert that these four skills promote better quality relationships, enhance emotional health and improve academic and work performance. Goleman's (1998, pp.26–27) personal competencies of *self-awareness*, *self-regulation* and *motivation* and social competencies of *empathy* and *social skills* are clearly reflected in EISIL pedagogy.

The contention that Emotional Intelligence is strongly connected to a teacher's work performance (effective teaching practice) has raised considerable interest over the past

decade (Perry & Ball, 2008). Turner et al. (2003, cited in Meyer & Turner, 2007) suggest that at least for upper-elementary and middle-school students, teachers' emotional responses, both supportive and non-supportive, are closely interconnected with student *motivation*. During the EISIL intervention, a few students innocently (or not so innocently) raised the question, 'Are teachers doing EISIL too?' and thus implied that some teachers (note: not the teachers in this study) could also be assisted by EISIL to Manage their Own Emotions and to improve the classroom learning environment.

The students' discerning question reflected Boler's (1999, cited in Meyer & Turner, 2007, p. xv) comment that 'we need to give pedagogical recognition of how emotions shape our classroom interactions'. Meyer and Turner suggested that teacher educators and education researchers need to search for answers as to why understanding emotion is essential to effective pedagogy and learning. One can think intelligently about emotions and emotions can help to make thinking more intelligent. This study provides teachers with the research literature to understand the value of why emotion is essential to effective pedagogy in the classroom. The positive feedback obtained through the classroom testing of my EI pedagogical scaffold (EISIL) suggests that it could usefully support teachers individually or as part of a TPL strategy.

## **7.4 Engagement with EISIL**

Engagement with EISIL influenced student and teacher ability to perceive changes in students' Attitude, Effort and Performance, through the development of students' *self-awareness, self-control, motivation, empathy* and *relationships skills* — the attributes or competencies of Emotional Intelligence. Teachers also became increasingly aware of their impact on student emotions, reflecting the cognisance of the value of emotionally intelligent behaviour in the classroom (Immordino-Yang & Faeth, 2011). This finding reflects Bar-On's (2012) and Fatum's

(2013) view that socially and emotionally intelligent behaviours are both teachable and learnable.

During the EISIL experience students learned about EI, about their learning, and about themselves. Using EISIL helped students to develop a cognitive understanding of the role of the emotions in learning, of the relationship between emotional intelligence and learning. Students identified breakthroughs in *self-awareness* about their learning which helped them to block internal and external distractions in class, concentrate more effectively and focus their attention on learning tasks. They learned to notice emotional signals to facilitate learning (Immordino-Yang & Faeth, 2011) and use positive emotional states to enhance focus (Willis, 2006). Students' perceptions of the impact of EISIL on their EI competencies and in turn on their Attitude, Effort and Performance (A, E and P) were supported by teachers' perceptions. The results of the study demonstrate that EISIL can lead to improvement in EI competencies, A, E and P. This outcome has led to a desire by teachers in the study school to understand more about EI and learning. The fulfilment of this desire has implications for teacher leaders and TPL.

Students and teachers reported that EISIL influenced students' A, E and P through the use of EI strategies to 'think about their thinking' and their behaviour when learning in class. EISIL helped students to:

- change the way they thought about themselves and their teachers. These breakthroughs in self-awareness increased their ability to identify and Manage their Own Emotions and the Emotions of Others, assisted them to resist the temptation of peer pressure to engage with other students at inappropriate times, to focus their attention and to understand and support their teacher's desire for effective lesson delivery and classroom management.

- reduce disruptions in the classroom by enhancing their ability to implement *self-control*, giving them strength to Delay Gratification and to be able to wait for a superior learning outcome. This understanding meant students were able to wait for a teacher's undivided attention to answer their question in class, rather than persist when a teacher was focused on another learning issue or classroom matter. The ability to delay gratification was supported by emotional learning to re-train the brain (Blakemore, 2005).
- stay focused on the learning task. The strategies of Meditation and Mindfulness assisted students to 'be in the moment and to shut out distractions that might interfere with learning, whether from an internal thought or from an external 'neighbour'. This gave students a perception of control over their emotions, reducing stress (Langer, 2000).
- assist their classmates to remain calm, experience optimism, and feel confident in their abilities (Fatum, 2013).

Meyer and Turner (2007) have found that consistent, positive emotional scaffolding appears to help establish the necessary foundation of trust needed for taking risks and to help students accept the self-responsibility so essential for learning in classrooms. They share the story of the mathematics teacher who used an EI strategy by scaffolding positive emotion about a mathematical problem, comparing it to a treat for which one must Delay Gratification, making it all the more desirable. She communicated the importance of learning by helping her students take intellectual risks and to learn from their mistakes.

An example from my own experience illustrates the value of using Emotional Intelligence scaffolding to support learning. During classroom observation as a Learning and Support Teacher, I noticed that students issued with an assessment task were daunted by the

challenge of writing an essay. The teacher asked: 'What are you feeling about this?' Their responses included: 'scared', 'I don't know how to do it!' and 'I'm not doin' this'. Some students appeared angry. The teacher asked, 'How do you feel if I say I will be working with you as a group and individually, to develop a scaffold for writing the essay?' The tension in the room eased palpably. The teacher understood the value of identifying emotions in the classroom and diffused the situation by asking the students to reflect upon their feelings and examine the true source of their concern — fear of not being able to do the learning task. Op't Eynde, DeCorte and Verschaffel (2007) endorse this strategy as a tenet of successful emotional coaching in the classroom.

Poole (1997) has advised that students should learn EI strategies so one knows what to do when fear or the amygdala 'attacks'. From the EISIL experience, students 'took up' strategies to become aware of, experience, manage and direct their own emotional energy (Watkins, 2004). The data show all students indicated they had 'taken up' an EISIL strategy. At least two students had taken up seven strategies confirmed by at least five teacher perceptions of students using the strategy. One student had taken up six strategies and two were confirmed by two teacher sightings. One student reported the 'take-up' of five strategies and one was confirmed by a teacher. One student had taken up four strategies and at least one was confirmed by teacher sighting. Four students had taken up three EISIL strategies and in one case the three strategies were confirmed by three teacher sightings. At least one strategy was identified by one teacher for the other three students. Considering the metacognitive nature of the EISIL strategies it is significant that teachers were able to perceive their deployment.

Teachers reported 100% of students improved their Attitude, Effort or Performance supporting Mavroveli and Sanchez-Ruiz's (2011) findings that Emotional Intelligence relates to academic behaviour and school achievement (cited in Furnham, 2012). The potential for continued

reinforcement of EISIL was identified for eight students by one teacher (one of these students by two teachers) and for another student by one teacher. Student data support teachers' perceptions of changes to Attitude, Effort and Performance. Student and teacher perceptions of the value of EISIL are supportive of each other.

The strongest 'take-up' of strategies identified by students was in Recognising and Managing my Emotions, followed by Mindfulness and Meditation, *empathy* and Managing others' Emotions. Teachers identified the 'take-up' of *relationship skills* by all students, except for one student in whom they felt it had more potential. Only one student indicated a perceived improvement in relationship skills. Interestingly, it could be students' management of their own emotions that has manifested in the improvement of social skills with other class members and their teachers.

Students had varied reactions to each of the strategies because they started with different EI strengths (as seen in the pre-intervention questionnaire) and they 'took up' what they felt was useful for their learning. A common theme is that EISIL appears to have cultivated the growth of *self-awareness* by helping students to be mindful and label emotions and to have promoted *self-control* by providing students with a suite of strategies to manage emotions for effective learning.

It appears engagement with EISIL has shown students neural pathways are malleable (Davidson in Hawn & Holden, 2011) as they purposively implement the strategies leading to perceived improvements in academic outcomes. Howard-Jones (2011a) reminds us that neuroscientists are just beginning to study the complex social domain of education. Ciarrochi, Forgas and Mayer (2001) have called for schools to become learning communities to research

the integration of social and emotional learning within academic learning. Student and teacher engagement with EISIL has demonstrated the possibility of building the bridge between neuroscience, social and emotional learning, and academic learning.

## **7.5 Variation in Outcomes**

A strength of the study is that all students self-identified or were identified by a teacher as having 'taken up' EISIL strategies. The extent of such 'uptake', however, did vary. One of the many potential reasons for a variation in outcomes for each student could reflect the student's existing level of competence in an EI attribute. Some students were identified as already having a high level of competence in an EI attribute and found value in understanding EISIL's explanation of its benefit in learning or they began to use it to influence others to improve the learning environment.

Students appeared to understand the key message that learning changes the brain by forming new connections. This was similar to the result of the intervention studied by Blackwell, Trzesniewski & Dweck (2007). However, for some students the time for implementation of EISIL may not have been long enough to allow them to understand or implement a strategy and to realise that they are in charge of this process of forming new connections. The influence of other events in students' lives during the study timeframe may have overridden their capacity to absorb and implement some strategies. Students' level of desire to change may have impacted on their willingness to respond to the intervention. The nature of relationships with their teachers in the study may have influenced their propensity to trial new strategies in different classrooms.

I believe the study has 'transferability' to other classrooms/schools. There is enough descriptive data and narrative of my context to enable comparison with other possible contexts. The benefits of using teachers teaching across different subjects means different responses are likely. Using teachers as a source of data helped to find out if there was a transferability of using EI strategies across subjects for which students did not have a preference. The inclusion of Indigenous students and a student with a disability assisted the assessment of potential applicability of Emotional Intelligence scaffolding to assist learning across diverse groups of learners. However, it is important to keep in mind that the 'power of action research is not in its generalizability' (Mills, 2011, p. 114). It is in the relevance of the findings to the researcher or the audience of the research.

## **7.6 Implications of EISIL for teachers, teacher leaders, teacher educators and teacher professional learning (TPL)**

All school personnel are faced with issues of Emotional Intelligence on several levels. It can be argued that teachers should be concerned not only with the social and emotional skills of their students, but must also be aware of their own Emotional Intelligence and apply their Emotional Intelligence skills and competencies to their dealings with students, parents, other teachers, administrative staff and teacher leaders. By extension, school personnel in contact with parents need to realise that parents and carers have different levels of Emotional Intelligence and different ways of using their Emotional Intelligence skills with their children. Similarly, teacher leaders should be concerned with Emotional Intelligence of students, teachers and, of course, themselves (Ciarrochi, Forgas & Mayer, 2001).

Understanding the potential engagement of mirror neurons and managing the impact of one's emotions on students is certainly relevant to the daily experience of teachers who need to

maintain good classroom order by anticipating the behaviour of students through imagining their intentions (Geake, 2009). Blackmore (2011) also points out that the significance of the emotional work of teachers and leaders in education is most recently evident in how the notion of Emotional Intelligence is being mobilised within educational policy and research. UK government policy, quoting Goleman's work, encourages teachers to intelligently handle the emotions of others and to develop emotional literacy in order to be more effective in communities and workplaces (p. 208). She notes Goleman's notion of Emotional Intelligence is reflected in the New South Wales Department of Education and Training School Leadership Capability Framework as a new source of leadership strength (p. 221).

Thus, it appears EI has been identified in government policy as a desirable attribute for teachers and teacher leaders and EI is now featured in School Leader Professional Learning. Given levels of teacher stress and dealing with continuous change, school leaders who want teachers who can do more than just survive the classroom, need to better understand how our emotions are expressed, and also how they can be managed. A awareness of EI can have a host of advantages for any workplace and is pertinent, if not indispensable, for the level of emotional work in schools, where teachers are dealing with challenging behaviours and learning needs and where parents share their deepest fears and sense of responsibility about their children's education and future (Ferrara, 2011).

The results of this study suggest there is a further need for EI and the role of the emotions in learning to feature in teacher education and Teacher Professional Learning. Lewkowicz (2007) echoes Goleman's assertion that people need to develop social and emotional competencies, that they can be learned, and that the school environment is an ideal context for such learning. This conclusion seems logical, as schools have access to students, a history of effective presentation of knowledge and skills, and highly competent professionals to transmit the

information. Simmons (2013, pp. 25–26) asks: 'How can we facilitate this [awareness of EI] at school in our roles as educational leaders? The answer, it seems, is not so cut and dried. We can't just reach for the step by step EI Manual and deliver a series of lessons on the topic. The programs in EI just aren't there in abundance as EI is such a relatively new area of psychology research. The programs are still evolving and being refined in regards to their reliability and validity.' All the research reviewed by Farrington et al. (2012, p. 51) showed that 'effective emotional–social training programs involved sequenced step-by-step approaches that actively involved students in skill development over extended periods of time and had clear and explicit goals. Programs were most effective when implemented with fidelity (Bond & H auf, 2004 ; Durlak, 1997; Durlak et al., 2011; Dusenbury & Falco, 1995; Gresham, 1995).' I agree with Farrington et al.'s assessment that this leaves little direction for classroom teachers wanting to support the positive development of social skills in their students outside of a formal program.

Thus, EISIL is a response to the quest for a program that uses EI strategies to facilitate learning. EI research still needs to be translated into practice to help teachers understand the role of emotions in their teaching and their influence on students' learning and development (Meyer & Turner, 2007). None of the teachers in my study had previously been 'trained' in Emotional Intelligence or Emotional Intelligence scaffolding. Their task in the study was to identify any changes in Attitude, Effort and Performance after students had been exposed to the EISIL. Teachers observed that EISIL had a positive impact in some way on each of the students and they recognised its potential to support learning. This outcome generated a desire in the teachers to know more about EI and learning.

The positive response to EISIL by teachers and students was a major outcome of Action Research Cycles 1 and 2, and the next task was to analyse learning from these cycles and reflect on how to extend the perceived benefits of EISIL to students and staff. Levin (2008)

suggests it is important to communicate with the reader of action research the gradual learning that takes place in the research process, singling out major incidents, identifying what has been learnt through practical achievements and what new actions were taken. In this way the traditional linear structure of a thesis might shift to a cyclical spiral of reflection and action. As McNiff and Whitehead (2002) state, 'Validation is not the summative point in the programme that has led to closure, but a formative engagement in an experience which contains emergent property for the realisation of new potentialities.'

Thus, it is important to share the beginning of the next cycle. The two other major outcomes (or incidents) from Action Research Cycles 1 and 2 were teacher request to know more about EI and student observations that some teachers could benefit from EISIL strategies. These results gave rise to the Action phase of what would become Action Research Cycle 3. An outline of this development follows.

As indicated earlier, my role as a Learning and Support Teacher gave me the imprimatur to provide professional specialist advice and professional learning through a range of strategies for class teachers of students with additional learning and support needs. This advice included direct instruction, delivery of adjusted learning programs, and assessment and monitoring of progress. It also included the areas of social integration, language and communication, literacy, numeracy and behaviour (DEC, 2012). The DEC is concerned that students with additional learning needs are 'falling through the cracks' in the mainstream classroom. 'Every Student, Every School' <http://www.dec.nsw.gov.au/every-student-every-school> is a DEC initiative to address this issue. The appointment of the LaST was part of this initiative.

Knowledge of recent neuroscience discoveries may help teachers understand the emotional and learning needs of students with Attention Deficit Disorder, Autism Spectrum Disorder and

challenging behaviours. My interactions with class teachers led to further examination of my practice in relation to improving their understanding of the recent research in neuroscience regarding the adolescent brain and the importance of emotions to learning. My Principal and Deputy Principal saw the EISIL intervention as successful and supported its scale-up, which led to my development of a professional learning unit 'Understanding the Adolescent Brain' for the local community of schools. The Deputy and I were successful in acquiring an 'Every Student, Every School' grant to support implementation by all teaching staff and School Learning Support Officers (teachers' aides) at Plateau High and all teachers in four neighbouring secondary schools.

The unit contains the slides on 'Brain Bits' from EISIL and slides introducing the perceived benefits of EISIL. The staff also experienced two EISIL strategies by viewing the Marshmallow Test Video to introduce the concept of Delaying Gratification and a Mindfulness journey to assist in accessing 'Flow'. Plateau High now plans to conduct a Mindfulness training course for all staff. A selection of slides and notes from the professional learning unit to illustrate how my research into the relevance of recent discoveries in neuroscience for learning led to a distillation of the information for educators can be found in Appendix L.

Evaluation of teacher learning from 'Understanding the Adolescent Brain' is being undertaken as part of Action Research Cycle 3. Initial response to the delivery of its content was positive and the context of its origin in my research journey augured well for piqued collegial interest in the empowering nature of Action Research methodology for teacher-researchers.

## **7.7 Implications of Action Research and Reflective Practice for teachers, teacher leaders, teacher educators and teacher professional learning (TPL)**

Action research is an effective way to examine one's own practice and the impact of one's work on student learning. My action research was underpinned by the key tenets of action research

as discussed in Chapter 4. I identified a problem, designed lessons to address the problem and implemented change ( Action). I sought and encouraged student reflection and teacher reflection ( Research) and led professional learning. This study is an example of how Action Research can support teachers to assess the impact of interventions to improve student learning.

### **7.7.1 Designing and implementing lessons to address an identified issue or problem**

An issue or problem in the study school was identified as emotions interfering with student learning. A lack of Emotional Intelligence was hypothesised as a factor having a negative impact on student learning. The EISIL was therefore designed as a series of lessons to address the emotional intelligence competencies as identified by Goleman (1996). A variety of resources was used to develop content and activities ( see Chapter 3) . A PowerPoint presentation used as the vehicle for effective delivery of content was positively received. Teacher- and student-led discussion and hands-on activities supported other learning preferences. Adjustments could be made for students with additional learning needs.

### **7.7.2 Encouraging student reflection and teacher reflection**

Pre-implementation questionnaires provided an opportunity for students to think about their Management of Emotions in the classroom and how they related to other students and their teachers. They provided an opportunity for teachers to consider students' 'emotional intelligence capabilities' as a baseline for examining changes in these capabilities after the EISIL lessons. 'Confessionals' enabled teachers to describe students' baseline EI competencies, Attitude, Effort and Performance. In-depth interviews 'provided a forum for reflection' for teachers and students as to how EISIL impacted on students' EI competencies,

Attitude, Effort and Performance.

Student and teacher perceptions of links between EISIL and improved learning outcomes can be as meaningful and valid (if not more) to teachers as a statistical model that has 'proven' those links. The pedagogical practice of developing a cognitive understanding of the relationship between EI and learning has identified how the actual implementation of EISIL teaching elements correlates to improved student learning. Teaching EISIL meant students were consciously experiencing the elements of Emotional Intelligence. Students learned about themselves: their own emotional intelligence competencies, the way they learned and areas of their learning that were impacted by EISIL. The views of teachers were sought to substantiate the interpretive lens of student perceptions of the impact of EISIL on their learning. The study yielded meaningful data for teacher professional practice. 'Stronger performing education systems ... improve classroom instruction by reflecting on classroom practice, mentoring one another and drawing on evidence-based research' (Donnelley, 2013).

As the teacher-researcher my action research journey enabled me to reflect on my own classroom practice and also included learning valuable lessons in negotiation with school staff and managing change. Moving into Action Research Cycle 3 I have had the opportunity to reflect on aspects of the intervention I would retain, what requires modification, how this can best be undertaken and what key steps should be taken to build on what has been learnt.

The value of students' voices in providing feedback regarding lesson effectiveness was profound. Their response to EISIL was positive and (as discussed elsewhere) possibly because it was 'all about them'. I found this response encouraging as I could see how easily and seamlessly an EISIL lesson could be integrated into a subject content lesson. Students' insightful comments regarding the palpable effect of teacher emotions on their learning

environment and how to manage those emotions (by the students and the teachers themselves) provide fertile ground for future study.

I discovered the value of ascertaining student feedback by email. Their emails were rich with data as they responded to aspects of their engagement with EISIL. My skills in negotiating with staff, students and parent/carers were enhanced as I sought permission and invited participation in the research. My timetabling skills were also sharpened when borrowing students for EISIL lessons, organising professional learning and determining interview schedules. I have also learnt about the process of change: preparing students and staff for change contributes greatly to its success and having support from senior executive in a school is critical to success of an intervention requiring timetabling flexibility.

I determined the EISIL PowerPoint would be retained as is for future implementation in the classroom. However, the EISIL PowerPoint needs refinement for targeted professional learning delivery to teachers. More detail on the plasticity of the brain and the notion that Emotional Intelligence can be learnt would bring the importance of EISIL lessons into sharper relief for teachers.

While I was a teacher–researcher during the time of the study, I have now gained a position as a Learning and Engagement Officer in the DEC with the job brief to assist, advise and support schools and teachers to achieve enhanced learning outcomes for students. I therefore envisage developing the EISIL as a teaching and learning intervention to be offered as a Registered Course (aligned to teaching standards with the NSW Board of Studies Teaching and Educational Standards) on NSW DEC's MyPL@Edu. This site is where teachers select and enrol in professional learning courses. Sustainability at state level might be achieved through support from DEC personnel and continued support from my research supervisors.

MyPL is the vehicle for teachers' registration of professional learning hours for maintenance of accreditation. In this way EISIL can be scaled up and used by other teachers to benefit students across the state.

Emotional Intelligence Scaffolding to Improve Learning is relevant to teachers in classrooms as well as to the education profession more broadly. It would be my intention to disseminate the findings of this study through publications about EISIL and Action Research for teachers. For education researchers, publications would offer another example of action research methodology.

### **7.7.3 Leading professional learning: Teacher Quality, Action Research and Reflective Practice**

A recent Leader of Teacher Professional Learning in the NSW Department of Education and Communities believes teacher quality is one of the most powerful tools we have to address educational equity as teachers have the capacity to mitigate the effects of environment (McIntyre, 2011). This belief supports Hattie's view that: 'The biggest effects on pupils' achievement occur when teachers become learners about their own teaching, and when students become their own teachers' (Hattie, 2009, p. 22). When teachers and students 'become their own teachers' they both exhibit desirable self-regulatory and self-assessment learning behaviours (Hattie, 2009). These attributes reflect EI competencies and metacognitive reflection. Action research is perhaps the most valuable methodology for classroom teachers to reflect upon their professional practice in the process of evaluating any differences that they made to student learning.

As Leitch and Day (2000, p.188) write:

Conceptualising reflection at the centre of any of the processes of change inherent in action research methodologies not only acknowledges that teaching is an 'emotional

practice' (Hargreaves, 1998, p. 319 ), but also that emotions are integral to organisational life (Fineman, 1993) frequently occurring as by-products of the socio-political circumstances in which teachers work.

Teachers' commitment to engaging in collegial efforts that contribute to enhanced student performance (and thus to teacher quality) is directly correlated to their feelings of efficacy and wellbeing derived from relational trust (Fink, 2013). This trust is based on other teachers' competence, dedication to shared purposes, and integrity. Such decisions are strongly influenced by emotion. The study of emotions in learning parallels the importance of emotions as a catalyst for change in teaching practice.

Teachers with many years of experience may need assistance to change their emotional rules of classroom culture in which they may have acted 'affectless', negative or controlling (Zembylas, 2003, cited Meyer & Turner, 2007). Darling Hammond (2005, cited in Rome, 2013, p.7) noted that 'though the importance of teaching experience has been reinforced by much research it is important to recognise that practice alone does not make perfect, or even good, performance. Learning to connect practice to expert knowledge must be built into learning experiences for teachers.' There is now an opportunity to build my knowledge of EIL and learning into learning experiences for teachers, in order to test further the value of the EISIL scaffold. The study's use of Action Research methodology may also be used as a model for teachers wishing to reflect upon their own practice.

## **7.8 Limitations of the study**

The setting for this research study was well suited to the AR methodology. A Learning and Support teacher was involved in a research process designed to inform professional practice. However, a number of factors must be acknowledged as limitations to the study parameters.

The higher-ability level of the Year 9 class (the class does have quite a range in abilities as often presents in a small school) suggests one could include a wider cohort with less able students in a future study. Another limitation is the regional/rural setting and further studies would consider different geographies, as well as different socio-economic demographics.

A longer study timeframe than a term and a half (15 weeks) would allow for greater potential of EI competency development and either some guided practice in class by the LaST or upskilling of the classroom teachers to incorporate EISIL in their lesson planning and delivery (or both). A longer timeline certainly seems recommended for efficacy of implementation and further successful outcomes. Most Mindfulness-based interventions are also 5–8 weeks in length and Meiklejohn et al. (2012) recommend longer timeframes to determine further benefits and sustainability.

While teacher commitment and time were very generous, journaling was not a strength of the teachers and further action research cycles would benefit from TPL in this reflection strategy. The study was dependent on the quality of my teaching and the quality of my relationship with the students (as it is in any teacher's AR). Research on EISIL presented by other teachers would provide evidence of EISIL efficacy independent of my delivery. I was well-known to the students, and knew their academic capabilities so I could give credence to their feedback. On the other hand, my familiarity with them could cloud my judgement and expectations. I could expect too much or too little and they might want to please me (Hawthorne effect). The same relationship issues may be a factor in teacher interactions. I also needed to be cognisant of the 'experimenter effect' where participants' assumptions about my motivations could unconsciously influence their perceptions in the study.

In my study the EISIL was delivered by a LaST with a special interest in EI and learning. The

students enjoyed the EISIL lessons, I believe, because of the relevance to 'themselves' and their feeling that they were learning 'secret teachers' business'. I acknowledge my level of rapport with the students could also be part of their enjoyment, or, because they were missing another class. In relation to the former, the Hawthorne effect is relevant as students coming under my close scrutiny may change their behaviour away from normal patterns to present a 'good face' to me (Liamputtong, 2009). The incorporation of EISIL into another classroom teacher's repertoire would be an avenue for further study (but I would envisage the first stage of EITPL would be experiencing EISIL itself with little adjustment).

## **7.9 Future research**

Future research directions emerged during the study. Some have been mentioned previously, such as: capturing a broader range of data from different student cohorts, teacher participants and timeframes. The targeting of specific student populations needing support with EI, e.g., students with autism spectrum disorder, oppositional defiance disorder or obsessive compulsive disorder, could assist these students to learn a range of EI strategies to assist their learning in the classroom.

Other student populations in rural and urban areas, those in the early years and senior years of high school and inclusion of more students with additional learning needs are all areas for future study. Students who have recently arrived in Australia could also benefit from the acknowledgement of emotions in learning, given the possible traumatic events in their previous lives.

A longitudinal study of EISIL implementation would allow research into how enduring the study results were and using other measures of success would also be valuable. In this study Attitude, Effort or Performance of students was perceived to improve. For example, while the argument can be made that employing principles of mindful instruction aids retention

(Performance), this argument sells the power of mindfulness short. Mindfulness is a facilitative state that promotes increased creativity, flexibility, and use of information, as well as memory and retention (Ritchhart & Perkins, 2000). A longer study would also help to identify if refresher information was needed to maintain efficacy of EI skills taught. Of course, examining EISIL to document the effect on student academic achievement, and on teachers in larger-scale trials that are called for by Walberg, Zins and Weissberg (2004) would be advantageous.

Student mental health is becoming a concern for educators. Students with additional learning needs appear to be presenting with co-morbidity of anxiety and other mental health concerns. Even students who are medicated need to be taught skills (Greene, 2008). Further studies into EISIL's success in inhibiting inappropriate flight or fight responses to emotional situations and increasing student capacity to pay attention would contribute to research into Mindfulness and Meditation education, Flow (Csikszentmihalyi, 1990), Positive Psychology (Seligman, 2002) and Positive Schools ([www.PositiveSchools.com.au](http://www.PositiveSchools.com.au)).

Teacher comments regarding the value of EISIL for boys suggest a potential area for further research. The recent spate of 'king-hits' involving young men in Australia as discussed in *The Sydney Morning Herald*, January 4–5 (Munro, 2014) quote Professor Ian Hickie, the executive director of the Brain and Mind Research Institute at the University of Sydney: 'Studies of the adolescent brain show it is particularly sensitive to social cues, facial expressions and the approval or disapproval of peers ... to compete for the attention of young women ... the commonest way to do that is in courting battles with other males ... homo sapiens have developed language and culture and systems to override these primitive urges. But some don't ever develop and many are simply delayed.' EISIL's strategies to strengthen students' neural circuits in recognising social cues and managing emotions could help boys to rely less on their physical capability to deal with 'fight or flight' (perpetuated by the glamorisation of biceps and 'sixpacks' in the media) and become more 'socially capable'.

As mentioned before, the delivery of EISIL by other teachers would address the question of variability in outcomes due to the teacher's instructional skills. Although differentiating between teaching styles and content is difficult it will still strengthen the understanding of EI and learning. The use of learning design frameworks to validate EISIL as being an effective and engaging approach to teaching and learning would contribute to the further development of EI in schools.

Research about teachers' exposure to EI theory and acceptance is also an area that deserves investigation. How ready are they to accept the value of EI pedagogy and undertake TPL to include it in their teaching and learning toolkit?

Research scientists in neuroscience and cognitive psychology are beginning to understand that the research they undertake may have relevance to education, but it needs to be viewed through an educator's lens. They do not have the classroom expertise needed for its application. Teachers need to take an active role (indeed an Action Research role) bringing their expertise, along with that of those working in other disciplines, to interpret and apply this research to the learning environment (Greenwood, 2006).

Sheridan, Zincheo and Gardner (in Illes, 2005, p. 271) advocate 'significant bridging research is needed in order for neuroscientific knowledge to become usable educational knowledge. Collaborating with neuroscientists in the use of fMRI to study the impact of EI strategies on student learning ('to see' the excitation of neuronal activity) would be a part of a trans-disciplinary vision to develop an educational system that understands brain biology better (Sylwester, 2000). Ansari, Coch and de Smedt (in Patten and Campbell, 2011) advocate that cognitive neuroscientists take an essential role in helping teachers to become literate in neuroscience, proposing that teachers reciprocate by enabling cognitive neuroscientists to become literate in the issues and problems related to classroom practice. Student beliefs about

IQ appear to crystallise in early adolescence and it appears that more constructive mental models can change students' beliefs about their academic capabilities (Blackwell, Trzesniewski & Dweck, 2007).

Sheridan, Zincheke and Gardner (in Illes, 2005) also encourage Departments of Education and Departments of Psychology and Neuroscience to embrace both quantitative and applied research. The Research Schools Network in Texas offers a framework for cross-disciplinary collaboration in biology, education and the cognitive and developmental sciences. It also wants to enable the next generation of teachers to see themselves as researchers as well as educators (Scwartz & Gerlach, 2011).

Managing schools as research cultures needs adequate support and careful planning for variations in staff involvement at different points in the school year and at different times in teachers' careers (Temperley & McGrane, 2005, cited in Baumfield, Hall & Wall, 2013). Emotional Intelligence in the exercise of school management and Leadership of teacher professional learning should not be overlooked as there is no doubt that school leaders are required to display appropriate emotion in a multiplicity of different situations (Leithwood et al., 2006, cited in Karareba & Clarke, 2011). School leaders need knowledge of successful change implementation frameworks to ensure sustainability of initiatives such as EISIL fostering a culture of research in their school (Scott, 1999).

While acknowledging the view of Freedman (Director of Programs, Six Seconds Emotional Intelligence Network) that teachers are overwhelmed, under-supported and over-extended (Corrie, 2009, p. vii), I agree with Corrie, that the creation of an emotionally intelligent classroom has to begin with teachers (Corrie, 2009, p. 8). Examining the value in TPL of EISIL for teachers' practice and any impact on teacher resilience would be worthwhile.

Further research in the use of EISIL would help to clarify its value in more varied contexts and with a wider range of students and teachers. Teacher reports on the influence of the EISIL invention support future implementation for other students. Emotions are powerful pedagogical tools and further exploration of scaffolding EI in curriculum delivery to improve student learning outcomes appears warranted. As a result of this study, we now know that learners can be taught to improve their emotional intelligence and teachers are becoming more aware of the need to modify their practices to cater for differences in emotional intelligence and to develop those dimensions of emotional intelligence that are underdeveloped (Cole, 2004). Further exploration of developing the professional capabilities of school leavers could include focus on the highest rated aspects of personal and interpersonal capability identified in studies of successful early career graduates ([http://www.uws.edu.au/strategy\\_and\\_quality/sq/resources](http://www.uws.edu.au/strategy_and_quality/sq/resources)).

## **7.10 Conclusion**

The Action Research methodology provided a structure for conducting research in my school setting that allowed me to be involved in all stages of the research process. It provided a framework for evaluating the experiences of each individual student's engagement in EISIL, which allowed me to understand how they got meaning from their experience and adopted EISIL strategies in their learning. As Pring (2004, p.140) claims: 'The notion of teacher as researcher is important. It is crucial to the growth in professional knowledge.' The study results have given me a deeper perspective on using Emotional Intelligence scaffolding to improve learning and have enhanced my professional practice as described below.

My professional practice has been enhanced by developing and delivering a teaching and learning program scaffolding EIS strategies to improve student learning. Data collection from students and teachers clarified the value of EISIL. My reflection on the nature of the delivery

model by a LaST is a positive one, particularly as the DEC has increased the number of days a school can retain a LaST in many schools. More staff means more time for a program to be delivered to small groups of students progressively throughout the year. I would also recommend TPL in Action Research for all teachers as a most effective form of Professional Learning. A future study of the value of EISIL in TPL and their own AR would have the potential to lead to teachers' adopting EISIL in their own classroom practice.

An action research methodology has enabled me as a teacher to research the role of the emotions in learning and expose it to students and teachers at the same time. It has provided me with the opportunity to explore the recent research on how the brain learns, to recognise the importance of emotions in teaching and learning, and to implement EISIL as a pedagogical tool. Some critics believe the concept of Emotional Intelligence can be seen to be 'a bit left field' or 'warm and fuzzy' (Waterhouse, 2010). My Principal, teachers, students and parents trusted my competence and integrity in this endeavour. There was complexity in collecting data that showed the link between the emotions and cognition. Students and teachers had to describe their understanding of the influence of EISIL on students' Attitude, Effort and Performance. Their perceptions are convincing and present a compelling rationale for future TPL in EISIL. Professor Geoff Masters from the Australian Council for Educational Research (2013) states that increasingly, Australian governments are looking to 'macro' solutions for improving student performance, e.g., more investment, smaller class sizes, greater principal autonomy and transparency, accountability, parental choice, standardised testing, school incentives, performance pay, common curricula, teaching standards. However, he notes that international experience shows that 'macro solutions' are weak drivers of improved student performance unless they result in 'micro change', i.e., more effective teaching practices. He suggests a starting point is a deeper analysis of the effectiveness of current improvement strategies in promoting day-to-day classroom practices that we know make a difference. This study offers a deeper analysis of a teaching practice improvement strategy that teachers and students perceive makes a difference to learning.

A final word on the importance of Emotional Intelligence for our students comes from respected Adolescent Psychologist Dr Andrew Fuller (2006, p. 13): 'The development of resilience, emotional intelligence and social competencies in young people is not only linked to long-term occupation and life success but is also associated with the prevention of substance abuse, violence and suicide.' This study suggests that EISIL can assist teachers to improve student learning by developing these competencies in students.

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## LIST OF APPENDICES

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## **APPENDIX A: ROLE OF THE LEARNING AND SUPPORT TEACHER**

*(NSW Department of Education and Communities, 2012)*

The *Learning and Support Teacher* (LaST) will, through the school's learning and support team, provide direct and timely specialist assistance to students in regular classes with additional learning and support needs and their teachers. Many of these students come from diverse cultural, linguistic and socio-economic backgrounds.

The *Disability Standards for Education 2005* provides the context for the role and activities of the Learning and Support Teacher.

Emphasis in the role will reflect the needs of individual students and school priorities and programs that support students with additional learning and support needs.

The role will be underpinned by a collaborative and consultative approach so that the student and/or their parent or carer are actively involved in the student's education.

The *Learning and Support Teacher* will:

- work collaboratively with the classroom teacher to support assessment for learning of their students with additional educational needs and identify specific learning and support needs
- plan, implement, model, monitor and evaluate teaching programs for students with additional learning and support needs in conjunction with regular classroom teachers
- plan, implement, model, monitor and evaluate personalised adjustments for learning where required, with the classroom teacher, student and/or parent or carer
- model exemplary classroom practice when tailoring adjusted learning programs for students with additional learning needs
- provide direct support for students with additional learning and support needs through a range of strategies (including direct instruction, delivery of adjusted learning programs, assessment and monitoring of progress) including the areas of social integration, language and communication, literacy, numeracy and behaviour. This may include students with confirmed disabilities
- provide professional specialist advice, support and mentoring to classroom teachers on:
  - ✓ how best to cater for the diverse learning needs in their classrooms, and
  - ✓ how to effectively work in partnership with families to maximise learning opportunities for students at school and at home
- provide professional specialist advice and assistance about students with additional learning needs to the school's learning and support team
- assist with professional learning for class teachers and school learning support officers within their school and local network of schools where appropriate.

In undertaking their work the *Learning and Support Teacher* will not be used to provide relief for teachers/executive or to establish a separate class.

## **APPENDIX B: 'MEMORY JOGGER'— REMINDER EISIL SCAFFOLD**

**The EISIL: Emotional Intelligence Scaffold to Improve Learning....remember...**

### **IQ and EI**

#### **Brain Bits**

- ▶ The Triune Brain
- ▶ Neurons
- ▶ The Lobes
- ▶ Cortical and Limbic Systems
- ▶ The Hippocampus
- ▶ The Amygdala
- ▶ Brain Plasticity

#### **Emotional Intelligence Competencies**

- ▶ Self-Awareness
- ▶ Self-Control
- ▶ Motivation
- ▶ Empathy
- ▶ Relationship skills

#### **Managing our Emotions**

##### **Emotional Hijacking**

- ▶ Managing disruptive emotions and impulses
- ▶ Suppression
- ▶ Reappraisal
- ▶ Distraction
- ▶ Get help

##### **Delaying gratification**

- ▶ the ability to wait in order to obtain something that one wants

- ▶ The famous Marshmallow test
- ▶ The Marshmallow test persists in adult life
- ▶ immediate gratification can undermine longer-term benefits

### **Expressing anger without fighting: Anger Management**

- ▶ Dealing with Anger
- ▶ Assertiveness not Aggressiveness
- ▶ Self-Control

### **Motivation**

- ▶ Emotional tendencies that guide or facilitate goals
1. Goal orientation
  2. Drive for achievement
  3. Commitment
  4. Initiative (ready to act on opportunities)
  5. Resilience (persistence despite setbacks)
  6. Optimism ( a view of the world –the glass is half-full, not half-empty)

### **Flow**

- ▶ Bounce-back
- ▶ Emotions are a 'natural resource'
- ▶ Harness the power of this resource to reach a goal
- ▶ Delay gratification
- ▶ Make choices
- ▶ Have positive self-belief and use positive self-talk

### **Recognising others' Emotions — Empathy**

The ability to connect with and understand the feelings of others:

1. Understanding others — sensing others' feelings, being interested
2. Developing others — encouraging others' abilities
3. Creating and maintaining rapport — people feel safe to talk freely to us

## **Managing others' Emotions**

'You sound very upset'

'I can see you are really uncomfortable with this'

'I can see you are very busy right now Sir...

...could you give me hand in a moment, please?'

## **Relationship Skills**

- ▶ Skills for dealing with others to get the desired results from them and reach personal goals
- ▶ Key to popularity, leadership and interpersonal effectiveness

## **People with high EI are fun to be with!!**

- ▶ They are able to:
  1. Express their feelings clearly and directly
  2. Read non-verbal communication
  3. Balance their feelings with reason, logic and reality
- ▶ They feel:
  1. Empowered
  2. Motivated
  3. Emotionally resilient

## APPENDIX C: INFORMATION SHEET for Principal

### Research Project: An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL).

I wish to invite [redacted] School to participate in my research on above topic. The details of the study follow and I hope you will consider being involved. I am conducting this research project for my Doctor of Education at the University of New England. My supervisors are Dr [redacted] University of New England, Dr [redacted] and Professor [redacted] [redacted] can be contacted by phone on 02 6773 [redacted]. Professor [redacted] can be contacted by email at [redacted] or by phone on 02 6773 and [redacted] can be contacted by email at [cryan29@une.edu.au](mailto:cryan29@une.edu.au).

An 'Emotional Intelligence Scaffold for Improving Learning' (EISIL) designed to improve student learning outcomes will be implemented as a tool for metacognitively going through a checklist to manage emotions optimally for learning and 'refashioning' the brain for learning interaction.

A case study will track the impact this intervention has on [redacted] Year 9 students who experience it.

We will also be looking to identify experiences students have using the intervention that would be useful to feedback into the intervention and if there any aspects of EI more important than the others for learning?

#### Procedure

The researcher developed and will teach and evaluate the usefulness of an EISIL to enhance learning. It is proposed, that the student participants will be four year 9 students from a class of thirty mixed ability students. Two boys, one identified as a high achiever (from the 'x' class) and one identified as a lower achiever and 2 girls, one identified as a high achiever (from the 'x' class) and one identified as a lower achiever will be selected to participate in alphabetical order. The teacher participants will be the students' teachers of English, Mathematics, Science, and HSIE (History/Geography) . Students will be withdrawn from class to experience the EISIL intervention.

- Step 1** Initial approval and support from the Principal was obtained.
- Step 2** Identify student and teacher participants.
- Step 3** Ethics Approval
- Step 4** Information letter Principal/signed [redacted] consent, Parent/Carer, and Young Person letters/signed consent
- Step 5** Teacher Professional Learning (TPL) Session — EISIL PowerPoint

- Step 6** Teacher completion of Student Report
- Step 7** Pre-Intervention interviews student and teacher participants
- Step 8** Implementation of EISIL for students
- Step 9** Journalling by students and teachers
- Step 10** Teacher completion of Student Report
- Step 11** Post-Intervention interviews student and teacher participants
- Step 12** Coding and analysis of data

**Research Process:**

It is anticipated that this research will be completed by the end of Term 4 2011. The results may also be presented at conferences or written up in journals without any identifying information.

This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No.HE11/148 Valid to 09/08/2012.)

Should you have any complaints concerning the manner in which this research is conducted, please contact the Research Ethics Officer at the following address:

Research Services  
University of New England  
Armidale, NSW 2351.  
Telephone: (02) 6773 3449 Facsimile (02) 6773 3543  
Email: [ethics@une.edu.au](mailto:ethics@une.edu.au)

Thank you for considering this request and I look forward to further contact with you.

Regards

Researcher's Name

## Principal's Consent Form

### Research Project: An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL).

I, ....., have read the information contained in the Information Sheets for Participants and any questions I have asked have been answered to my satisfaction. YES / NO

I agree that my school can participate in this activity, realising that I may withdraw permission at anytime. YES / NO

I agree that research data gathered for the study may be published using pseudonyms. YES/NO

.....  
Principal Date

.....  
Researcher Date

## APPENDIX D: INFORMATION SHEET FOR PARENTS/CAREGIVERS

### **An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL).**

We wish to invite your student to participate in my research on above topic. Dr [REDACTED] at the University of New England. Mrs Carolyn Ryan has been a high school teacher for 35 years, as a classroom teacher, Head Teacher and Deputy Principal and is now working as a support teacher learning and completing her Doctor of Education studies. We are currently doing a research study that is trying to find out more about how using 'Emotional Intelligence' strategies can help students' learning.

We are hoping that young people will help us by taking part in this study. This Information Sheet has the answers to many of the questions that you may have about the study.

#### **1) What is the study for and why is it being done?**

We hope that by doing this study, we will learn more about how using 'Emotional Intelligence' strategies can help students' learning. There is a lot of research about 'Emotional Intelligence' but not very much on how students can use Emotional Intelligence strategies to improve their learning. This information will help us to make teaching programs for teachers so that they can do the best job in helping children to learn better even when some are already learning well. This will be one of the first studies in Australia to do this for all students.

#### **2) What would your student be asked to do if they took part in the study?**

We want your student to participate in 8 lessons over 2 weeks designed to teach emotional intelligence strategies to use in their learning. These lessons will be delivered by Mrs Ryan. They will be asked to talk about how they use these strategies in their learning over the following 6 weeks. We will audio record their answers as it will help us understand how they might be using these strategies in their learning.

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They will be asked at the beginning of each session if they are happy to be recorded. These audio records will NOT be heard by anyone except by Brenda, Margaret and Carolyn. They will only be kept for a short time to allow us to gather all the information we need and then will be destroyed. Until they are destroyed they will be kept in a locked program on a private computer.

### **3) What will be done with this information that they give?**

We will type out every word that is on the audiofile so that we know we haven't missed anything. This is called the 'transcript'.

We make sure that no-one's real names are used in the 'transcript' of the interview that is printed out. This makes sure that nobody reading it can tell who has said what, and so what they say stays confidential.

Then, the researchers read through these typed-out 'transcripts' very carefully, making notes and trying to pick out all of the most interesting and important things that the participants have been telling us. We are looking for things that will help us and other people understand more about how students use Emotional Intelligence strategies in learning.

The researchers will write a report at the end of the study so that we can share the information from this study with other researchers and teachers who are interested and involved in children and young people's education.

This story will form the basis of Carolyn's Doctor of Education studies.

We also try to write articles about the study and publish these and also talk about the study at meetings and conferences so that what we have found out actually gets to people who might be able to use the information to help. If we didn't do this, then the students who helped us might feel that they had done this for nothing.

Remember again though, that in any of the articles or reports, their name will not appear as what they tell us is confidential and private. What we would do is perhaps say that "A 14 year old girl said that using a particular emotional intelligence strategy...." or write that "John (not his real name), said that he likes to use a particular emotional intelligence when..."

### **4) Who will be told about any information that they give?**

Each of the sessions and the interviews are strictly confidential. What they tell us will stay within the research team, apart from when we report the study as we explained above in point (3). None of what they tell us will become part of any school records or notes. All information remains confidential.

## 5) Can they change my mind if they decide to participate?

Yes. They can choose to leave the study at any time and nothing at all will be said, apart from 'Thank you very much for thinking about taking part'. They can also choose to discuss or not discuss any aspect of their experience.

## 6) Will the study benefit them in any way?

You might feel that by participating, your student might be helping their learning and helping other students and teachers to get a better understanding of using Emotional Intelligence strategies in learning programs.

## 7) Have you got permission to do this study?

Yes. We have permission from the Ethics Committee Human Research Ethics Committee of the University of New England. They have looked carefully at this study and have 'passed' it. Other researchers and teachers, including Mr ████████, Ms ████████ and Dr Hallette also looked carefully at the study and thought that it was a good study to do.

This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No. HE11/148, valid to 09/08/2012).



Email: [ethics@une.edu.au](mailto:ethics@une.edu.au)

## 8) What if I have other questions about the study?

Please contact the Principal Researcher, Dr Brenda Wolodko at any time. Her office phone number is 6773 2021. You can also call Professor Margaret Sims on 6773 3823 or call Mrs Ryan on 66572001.

If you have any complaints about the way this research is conducted, please contact the Research Ethics Officer at the following address:

Research Services  
University of New England  
Armidale, NSW 2351.

Telephone: (02) 6773 3449 Facsimile (02) 6773 3543

**9) What if they feel that that they would like to talk to someone after the interview about any thoughts, feelings or problems that they have?**

You or your student may contact any member of the research team, or you may prefer to speak with Ms [REDACTED] or Mr Bleakely.

Thank you for taking the time to read this and in anticipation of your support of this study.

[REDACTED], Carolyn Ryan

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## CONSENT FORM for PARENTS/CAREGIVERS

### An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL).

*Please write your name after 'I,' and circle the yes/no answer you want.*

I, ....., have read the Information Sheet for Parents/Caregivers and any questions I asked have been answered and I understand them. YES/NO

I give permission for my student, ....., to take part in this work, and I know that I or my student can change our mind at any time. YES/NO

I agree that any work taken and anything they talk about will be written about using an invented name. (They can suggest a name they would like me to use.) YES/NO

I agree that the student's interviews will be audio recorded. YES/NO

.....  
Parent/Carer

.....  
Date

.....  
Researcher

.....  
Date

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## **APPENDIX E: INFORMATION SHEET for PARTICIPANTS**

### **Research Project: An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL).**

I wish to invite you to participate in my research on above topic. The details of the study follow and I hope you will consider being involved. I am conducting this research project for my Doctor of Education at the University of New England. My supervisors are Dr [REDACTED] [REDACTED] of University of New England. Dr [REDACTED] Wolodkocan be contacted by email at [REDACTED] or by phone on 02 6773. Professor [REDACTED] can be contacted by email at [REDACTED] or by phone on 02 6773 and I can be contacted by email at [REDACTED]

#### **Aim of the Study:**

An 'Emotional Intelligence Scaffold for Improving Learning' (EISIL) designed to improve student learning outcomes will be implemented as a tool for metacognitively going through a checklist to manage emotions optimally for learning and 'refashioning' the brain for learning interaction. A case study will track the impact this intervention has on [REDACTED] Year students who experience it.

We will also be looking to identify experiences students have using the intervention that would be useful to feedback into the intervention and if there any aspects of EI more important than the others for learning?

#### **Time Requirements:**

Teacher Professional Learning (TPL) Session — EISIL PowerPoint

Journalling to enable: Completion of two one page student reports

Interviews: Two interviews lasting one lesson each that will be audiotaped/electronically captured.

There will be a series of semi-structured questions that allow you to explore your views of students' use of emotional intelligence strategies in their learning. These interviews will be voice recorded or electronically captured. Following the interview, a transcript will be provided to you if you wish to see one. Any information or personal details gathered in the course of the study will remain confidential. No individual will be identified by name in any publication of the results. All names will be replaced by pseudonyms; this will ensure that you are not identifiable.

Participation is completely voluntary. If you decide to participate, you are free to withdraw your consent from the project and discontinue at any time without having to give a reason and without consequence if you decide not to participate or withdraw at any time.

It is unlikely that this research will raise any personal or upsetting issues but if it does you may wish to contact your local Community Health Centre (66577777).

The voice recordings will be kept in a locked filing cabinet in the researcher's office. The transcriptions and other data will be kept in the same manner for five (5) years following thesis submission and then destroyed. Only the investigators will have access to the data.

### **Research Process:**

It is anticipated that this research will be completed by the end of Term 4 2011. The results may also be presented at conferences or written up in journals without any identifying information.

This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No.HE11/148 Valid to 09/08/2012.)

Should you have any complaints concerning the manner in which this research is conducted, please contact the Research Ethics Officer at the following address:

Research Services  
University of New England  
Armidale, NSW 2351.  
Telephone: (02) 6773 3449 Facsimile (02) 6773 3543  
Email: [ethics@une.edu.au](mailto:ethics@une.edu.au)

Thank you for considering this request and I look forward to further contact with you.

Regards

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***Consent Form for Participants***

**Research Project: An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL).**

I, ....., have read the information contained in the Information Sheet for Participants and any questions I have asked have been answered to my satisfaction.  
YES/NO

I agree to participate in this activity, realising that I may withdraw at any time.  
YES/NO

I agree that research data gathered for the study may be published using a pseudonym  
YES/NO

I agree to the interview having my voice recorded and transcribed. YES/NO

.....  
Participant Date

.....  
Researcher Date

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## **APPENDIX F: INFORMATION SHEET FOR CHILDREN AND YOUNG PEOPLE (aged 12-16)**

### **An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL).**

We wish to invite you to participate in my research on above topic. Dr Brenda Wolodko and [REDACTED] at the University of New England. Mrs Carolyn Ryan has been a high school teacher for 35 years, as a classroom teacher, Head Teacher and Deputy Principal and is now working as a support teacher learning and completing her Doctor of Education studies. We are currently doing a research study that is trying to find out more about how using 'Emotional Intelligence' strategies can help students' learning.

We are hoping that young people will help us by taking part in this study.

This Information Sheet has the answers to many of the questions that you and your parent(s) may have about the study. There is a lot of information in here so don't worry if it is too much for one read. Just read through a bit at a time if you want.

### **1) What is the study for and why is it being done?**

We hope that by doing this study, we will learn more about how using 'Emotional Intelligence' strategies can help students' learning. There is a lot of research about 'Emotional Intelligence' but not very much on how students can use emotional Intelligence strategies to improve their learning. This information will help us to make teaching programs for teachers so that they can do the best job in helping children to learn better even when some are already learning well. This will be one of the first studies in Australia to do this for all students.

### **2) What would I be asked to do if I took part in the study?**

We want you to participate in 8 lessons over 2 weeks designed to teach you emotional intelligence strategies to use in your learning. These lessons will be delivered by Mrs Ryan. You will be asked to talk about how you use these strategies in your learning over the following 6 weeks. We will audio record your answers as it will help us understand how you might be using these strategies in your learning.

You will be asked at the beginning of each session if you are happy to be recorded. If you are not feeling well, or do not feel comfortable to be recorded, that's OK, and you won't have to talk that day.

These audio records will NOT be heard by anyone except by Brenda and I. They will only be kept for a short time to allow us to gather all the information we need and then will be destroyed. Until they are destroyed they will be kept in a locked program on a private computer. This is something we will be very careful about, as we must follow special rules set down by the university to protect you.

### **3) Will my parents have to do anything?**

They will make sure you are happy to participate in this research project.

### **4) When and where would the sessions and interviews take place?**

Each session will be in an office or room at school that you will be familiar with. The sessions will take place twice a week for the first 2 weeks (weeks 2 and 3) and then interviews once a [REDACTED] during Term 3

### **5) What information will the researchers want me to tell them?**

We want you to tell us all about your thoughts and feelings about using the Emotional Intelligence strategies in your learning. We want you to tell us about things that YOU think are important.

### **6) What will be done with this information that I give?**

We will type out every word that is on the audio file so that we know we haven't missed anything. This is called the 'transcript'.

We make sure that no-one's real names are used in the 'transcript' of the interview that is printed out. This makes sure that nobody reading it can tell who has said what, and so what you say stays confidential.

Then, the researchers read through these typed-out 'transcripts' very carefully, making notes and trying to pick out all of the most interesting and important things that the participants have been telling us. We are looking for things that will help us and other people understand more about how students use Emotional Intelligence strategies in learning.

The researchers will write a report at the end of the study so that we can share the information from this study with other researchers and teachers who are interested and involved in children and young people's education.

This story will form the basis of Carolyn's Doctor of Education studies.

We also try to write articles about the study and publish these and also talk about the study at meetings and conferences so that what we have found out actually gets to people who might be able to use the information to help. If we didn't do this, then the children and young people who helped us might feel that they had done this for nothing.

Remember again though, that in any of the articles or reports, your name will not appear as what you tell us is confidential and private. What we would do is perhaps say that "A 14 year old girl said that using a particular emotional intelligence strategy...." or write that "John (not his real name), said that he likes to use a particular emotional intelligence when..."

## 7) Who will be told about any information that I give?

Each of the sessions and the interviews are strictly confidential. What you tell us will stay within the research team, apart from when we report the study as we explained above in point (6). None of what you tell us will become part of any school records or notes. All information remains confidential.



## 8) Do I have to take part in this study?

Not at all. You should only take part if you want to and are happy to be interviewed and recorded as you do it.

## 9) What will happen if I don't want to take part?

Nothing at all. You have every right to say that you would rather not take part.

## 10) Can I change my mind if I decide to participate?

Yes. You can choose to leave the study at any time and nothing at all will be said, apart from 'Thank you very much for thinking about taking part'. You can also choose to discuss or not discuss any aspect of your experience - whatever you feel most comfy with.

## 11) Will the study benefit me in any way?

We can't promise that you will get any benefit from taking part. However, you might feel that by participating, you might be helping your learning and helping other students and teachers to get a better understanding of using Emotional Intelligence strategies in learning programs.

## 12) Have you got permission to do this study?

Yes. We have permission from the Ethics Committee at the Human Research Ethics Committee of the University of New England. They have looked carefully at this study and have 'passed' it. Other researchers and teachers, including Mr [REDACTED], Ms Marden and Dr [REDACTED] have also looked carefully at the study and thought that it was a good study to do.



### **13) What if I have other questions about the study?**

Please contact the Principal Researcher, Dr Brenda Wolodko at any time. Her office phone number is 6773 2021. You can also call Professor Margaret Sims on 6773 3823 or see Mrs Ryan in the Maths Staffroom.

If you have any complaints about the way this research is conducted, please contact the Research Ethics Officer at the following address:

#### **Research Services**

University of New England  
Armidale, NSW 2351.

Telephone: (02) 6773 3449 Facsimile (02) 6773 3543

Email: [ethics@une.edu.au](mailto:ethics@une.edu.au)

### **14) What if I feel that I would like to talk to someone after the interview about any thoughts, feelings or problems that I have?**

You may contact any member of the research team, or you may prefer to speak with Ms [REDACTED], Mr Bleakely or your parents.

### **15) The formal 'stuff':**

This project has been approved by the Human Research Ethics Committee of the University of New England (Approval No. HE11/148, valid to 09/08/2012).

Please keep this information sheet as you might want to discuss it with friends, family or relatives.

Thanks a lot for taking the time to read this and for any help that you are able to give us with this study.

[REDACTED], Carolyn Ryan

## ASSENT FORM for STUDENTS

### An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL).

*Please write your name after 'I,', and circle the yes/no answer you want.*

I, ....., have read the Information Sheet for Students and any questions I asked have been answered and I understand them. YES/NO

I agree to take part in this work, and I know that I can change my mind at any time. YES/NO

I agree that any work taken and anything we talk about will be written about using an invented name. (You can suggest a name you would like me to use.) YES/NO

I agree that interviews will be audio recorded. YES/NO

.....  
Student Date

.....  
Parent/Carer Date

.....  
Researcher Date

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**APPENDIX G: 'PLATEAU' HIGH SCHOOL  
PUPIL REPORT CARD CONFIDENTIAL**

**Year:** .....

**Name:** .....

**Date:** .....

Could you assist by commenting on the

*\* Performance*

*\* Effort*

*\* Attitude*

of the above student.

Subject:.....

Teacher:.....

.....

.....

.....

.....

.....

.....

.....

.....



## APPENDIX 1: SERAP APPROVAL



Mrs Carolyn Ryan  
PO BOX 505  
BELLJNGEN NSW 2454

DOC 111223566

Dear Mrs Ryan

SERAP Number **2011166**

I refer to your application to conduct a research project in New South Wales government schools entitled *An Impact Evaluation of an Intervention: Using an Emotional Intelligence Scaffold for Improving Learning (EISIL)*. I am pleased to inform you that your application has been approved. You may now contact the Principals of the nominated schools to seek their participation. **You should include a copy of this letter with the documents you send to schools.**

This approval will remain valid until 09/08/2012.

The following researchers or research assistants have fulfilled the Working with Children screening requirements to interact with or observe children for the purposes of this research for the period indicated:

**Name**

**Approval expires**

Carolyn Ryan

09/08/2012

I draw your attention to the following requirements for all researchers in New South Wales government schools:

- School Principals have the right to withdraw the school from the study at any time. The approval of the Principal for the specific method of gathering information for the school must also be sought.
- The privacy of the school and the students is to be protected. The participation of teachers and students must be voluntary and must be at the school's convenience.
- Any proposal to publish the outcomes of the study should be discussed with the Research Approvals Officer before publication proceeds.

When your study is completed please forward your report marked to Manager, Schooling Research, Department of Education and Training, Locked Bag 53, Darlinghurst, NSW 2010.  
Yours sincerely

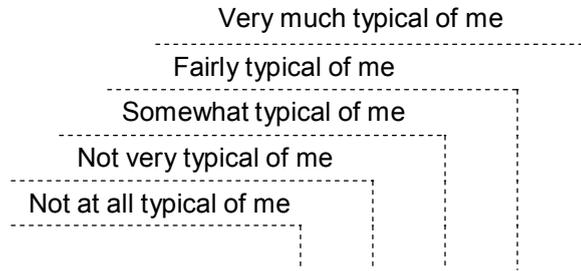
  
Bill Tomlin  
Senior Manager  
Student Engagement and Program Evaluation  
15 October 2011

Student Engagement and Program Evaluation Bureau NSW Department of Education and Communities  
Level 3, 1 Oxford Street, Darlinghurst NSW 2010 - Locked Bag 53, Darlinghurst NSW 1300 Telephone: 02 9244 5619 - Fax: 02 9266 8233 - Email: sw.ap@del.nsw.edu.au

## APPENDIX J: RECOGNISING EMOTIONS QUESTIONNAIRE STUDENTS

Name: ..... (Pseudonym:.....)

Circle the number 1 to 5 that you feel best describes 'you':



	1	2	3	4	5	
I recognise my moods in class						<i>Self-Awareness</i>
I am able to control my emotions in class						<i>Self-Control</i>
I am usually sure enough about how I am feeling that I can put my emotions into words						<i>Self-Awareness</i>
I can concentrate in a noisy environment						<i>Self-Control</i>
I find myself noting people's facial expressions						<i>Empathy</i>
When I speak to people, they sometimes move back to increase the distance between us						<i>Empathy</i>
I know more about people's true feelings than they do themselves						<i>Empathy</i>
I get surprised when people get upset about something I said						<i>Empathy</i>
I often find myself responding to another person's discomfort or distress						<i>Empathy</i>
If I have a minor disagreement with a friend, it leaves me upset for hours or more						<i>Relationship Skills</i>
If a teacher reprimands (gets cross with) me, I can shrug it off as a learning experience						<i>Relationship Skills</i>
I prefer to work in a group rather than by myself						<i>Relationship Skills</i>

Questions informed by Davidson, R. & Begley, B. (2012, pp.43–65). 'Assessing Your Emotional Style', *The Emotional Life of Your Brain*. UK: Hodder & Stoughton.

APPENDIX K: RECOGNISING EMOTIONS QUESTIONNAIRE TEACHERS

IN A CLASSROOM SITUATION...

	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-awareness	Moody	Uses self-preservation	Aware of own limitations	Confident	Composed
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-Control	Tantrums	Volatile	Rolls eyes	Internalises feelings	Stoic
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Motivation	Always off task	Requires high level of direction	Requires coaxing	Not challenging themselves	Self-directed
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Empathy for other students	Insensitive	Indifferent	Tolerant	Considerate	Compassionate
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Empathy for other students	Insensitive	Indifferent	Tolerant	Considerate	Compassionate
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social relationships (work related) with other students	Isolated	Fearful	Dependent on certain others	Selective	Gregarious
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Social relationships with teachers	Negative	Immature	Comfortable	Confident	Mature



## Myelination

- Initially, neurons are 'nude', but in the course of development, white fatty tissue called myelin encases the projections of neurons that interconnect them, a process called myelination.
- Myelin, which acts like plastic insulation around an electrical wire, increases the speed of neural impulses and so improves information transmission (stops them 'shorting' out).

## Synaptic pruning

- Soon after birth, unused and unnecessary synapses start to be eliminated, a process called *synaptic pruning* (*apoptosis*).
- Synaptic pruning enhances the brain's functioning (pathways between the forest patches analogy).
- It makes the brain more efficient by transforming an unwieldy network of small pathways into a better organised system of superhighways.

As a general rule, we tend to assume that 'more is better', but that is not the case here.

As a rule, the brain regions in which pruning is taking place at a particular point in development are the regions associated with the greatest changes in cognitive functioning during that stage.

## Changes in Adolescence

- The most important part of the brain to be pruned in adolescence is the *prefrontal cortex*, the region of the brain directly behind your forehead, which is most important for sophisticated thinking abilities, such as planning, thinking ahead, and weighing risks and rewards
- Regions of the brain responsible for reasoning become better connected with those responsible for experiencing emotions : better impulse control and self-regulation
- This is not complete till our mid-20's.

- increasing focus: adolescents are less likely than children to activate prefrontal regions that are not relevant to performing the task well and
- become more likely to use multiple parts of the brain simultaneously and coordinate activity among prefrontal regions and other areas of the brain, such as the limbic system
- at same time, things that feel good feel better during adolescence: dopamine squirt = 'reward' tunnel vision

## Learning

- Learning occurs when the synapses make physical and chemical changes so that the influence of one neuron on another also changes
- Brains of adolescents with a history of abuse show less blood flow to the cerebellum, a smaller corpus callosum and thus, reduced integration activity between left and right hemispheres, and
- triggers hormonal changes that rewire the brain to deal with the malevolent world

## Hot and Cold Cognition

- 16 vs mid - 20's
- brain is 'plastic'
- its development is affected by experience as well as biology
- both synaptic pruning and myelination are influenced by experience
- repeated activation of a specific collection of neurons engaging in a particular behaviour will actually strengthen the connections among those neurons making them function more efficiently.

Practising the same task over and over again makes that task easier to perform each time.

## So what ? for students with ASD

- Frontal lobes more grey matter, significantly less white matter: this an executive control area that plays a major role in understanding other people's mental states and acting accordingly
- Gaze avoidance may be serving the functional purpose of lowering anxiety levels created by a stimulated amygdala
- Elevated serotonin levels
- Von-Economo neurons in the cortex have many receptors for dopamine and serotonin (believed to be strongly linked to formation of social bonds, rewards and punishments and intuitive responses to social situations). Reduced in volume in individuals with ASD.
- Studies with fMRI and EEG show little activity in mirror neuron systems.

- Obsessive or repetitive behaviours: abnormally enlarged structures in brain's limbic area. Strong genetic link.
- Underconnectivity: Larger brain size may interfere with critical connections between neuronal network particularly those responsible for language and social behaviour

## So what ? for students with Behaviour Issues

- ADHD "brains" frontal and temporal lobes significantly reduced in size. These cerebral areas help moderate behaviour and contain some components of the attention systems
- Imbalance in neurotransmitters. Deficiencies in dopamine and norepinephrine would affect arousal and alertness. Low serotonin is linked to impulsivity and erratic behaviour
- "Treatment": Medications and /or Therapies addressing cognitive function, especially memory

## Why use EISIL?

- Many of the most important brain changes that take place during adolescence are not in the brain's structure, but in how the brain works
- The power of the amygdala: recognising and controlling emotions
- The power of empathy: recognising and controlling others' emotions
- the mere presence of peers activates adolescents' reward centres
- teenagers more inclined to take risks when they're with their friends because they're more likely to focus on the rewards of a risky choice than on the potential costs
- Quieting the 'butterfly' brain of today's adolescents

Latest brain science has some great messages about students' potential and the underpinning basis for intelligence and ability.  
The brain grows and develops across whole lifetime.

- maturation of the brain systems responsible for thinking ahead and controlling emotions is influenced by the sorts of experiences young people have, including their experiences in the classroom
- practicing something will strengthen the brain circuits that control emotions
- by providing opportunities to practice things like anticipating the consequences of a decision, regulating their own emotions and influencing the emotions of others, overtime, as synapses are pruned and neural circuits myelinated, adolescents' ability to exercise control over their own behaviour and the behaviour of others, including their teachers will improve