The Affective Component in Effective Education

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Abstract.

This study investigated eight and nine year old children's capabilities to develop skills in the intrapersonal intelligence domain as defined by Howard Gardner. A group of twenty-seven, seven to nine year olds were introduced to a program specifically designed to foster their self-knowledge as learners and their self-management skills in the English learning environment. The students were introduced to activities that would help them to identify their own relative strengths and limitations and use this knowledge to negotiate a learning environment that would best suit their own learning needs. This program included developing skills in goal setting and identification of personal learning strategies. It also sought to improve work habits and student on- task behaviours and encourage self-monitoring, self-evaluation and self-reflection.

The results obtained evidenced a considerable improvement in the students' self-knowledge and how this impacted on their perceptions of themselves as learners. The students grew increasingly aware of their own relative strengths and used this information to negotiate their learning environment, to identify strategies that worked for them and to take increasingly more responsibility for their own learning.

As a result of the findings of this study, there are clear implications that if students are provided with opportunities to develop accurate intrapersonal intelligence, this improved awareness of 'self' can have an impact on successful learning. This study indicates that if teachers provide students with opportunities to investigate and learn about themselves as learners, to build skills in goal setting and to identify personal learning strategies, then an increase in self-knowledge and self-management will impact positively on the students' capacity to learn successfully. Consequently, programs and strategies designed to promote students' intrapersonal intelligence may become a valuable part of school practice and curricula.

Graphs and Tables

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Introduction

Education has traditionally been the process by which young people were prepared for the roles they would assume in adult life: in work, leisure, family and, to a certain degree in their personal relationships. The purpose of education in the third millennium will probably be no different in that respect. What is apparent, however, is that the lives that students in primary schools today will experience as adults, will be considerably different to the experiences of their grandparents and even their parents.

Never before in the history of mankind has change been so rapid, so technological and so global (Atkin, 2001). As Traub stated "this is a strange moment in education" (Traub,1999,p.1). The challenge for educators is both exciting and overwhelming. What skills and life competencies will students in schools today need to allow them to be fulfilled adults, at ease with the constant demands of relationships, work, spirituality and the increasingly technological component of all aspects of life? The whole workplace dynamic has changed. The explosion of technological advance and automation in the workplace has redefined the workforce and economy forever and with it the hopes, expectations and assumptions of the young people entering into it.

Most teachers will have no experiences of the workforce into which their students will graduate. The education system that served perfectly well for these adults, is now under constant criticism and attack. Teachers themselves are challenged, not only to try and make sense of the out -of -school world of the students, but prepare those students for increasingly rapid, technological change in every aspect of their lives.

Teachers, of course, will be required to do this within the context of an educational system, which is, by nature, conservative and, unlike many other workplaces, is exceptionally slow to implement the findings of relevant research, including that relating to new understandings of the nature of intelligence. Yet it is quite possible that this research may provide some signposts or guidelines to the multitude of questions and uncertainties that are currently being debated regarding the future directions of education. This may be the case because the perceptions teachers hold pertaining to the nature of intelligence underpins every aspect of their practice.

Chapter One

Intelligence For The Third Millennium

"Knowledge, rather than natural resources or brute horsepower is now the most valuable commodity of economic and social rewards" (Boston, 2001 p.43).

This statement serves to highlight the challenges faced by education in rapidly changing societies. The training in basic skills, the development of thinking strategies and the acquisition of specialised knowledge has traditionally been viewed as the responsibility of schools and other educational systems. In order to meet the current social and economic needs of these societies, education must provide educational opportunities for all students to experience academic success.

However, many practices employed in contemporary classrooms reflect the social and economic needs of the past, not those of the present or the future.

> A human being miraculously transported from 1900 to our time would recognize much of what goes on in today's classrooms- the prevalent lecturing, the emphasis on drill, the decontextualised materials and activities ranging from basal readers to weekly spelling tests. With the possible exceptions of the church, few institutions have changed as little as those changed with the formal education of the next generation (Howard Gardner 2000b. p.1).

This model of education, known as the Industrial Model, has served society well in the past, but as Gardner (2000c) explains, the model of schooling that prepared individuals for a lifetime of work, frequently in one occupation, is now 'doubly flawed', as it does not only fail to prepare students for their future roles in life, it does not reflect the interdisciplinary understandings of the human mind.

There exists a need to develop some guidelines that will enable educators to maximize academic success for all students, while remaining mindful of the specific needs of individuals to function effectively, and to live comfortably in the Knowledge Era. Central to the development of this new framework will be contemporary theories about the nature of intelligence, in particular Gardner's theory of multiple intelligences.

Gardner's Multiple Intelligences Theory

One of the leading educationalists of the last two decades is Howard Gardner. Described as the "…. the reigning progressive guru…"by Eberstadt (1999,p.1) and "…a favourite arts education guru." (Roper & Davies, 2000, p.1), Gardner has been consulted on every aspect of education from homework (Chaika, 2000) to identifying the underlying factors that tip the balance between success or failure, in this case, in the soccer world (Gardner, 2002d).

Gardner (1993a) refutes the theory that intelligence is a single fixed, uniform phenomenon. Instead his theory proposes a much wider, more encompassing view of intelligence, one that cannot be measured by the standard IQ tests. Indeed, Gardner asserts that intelligence is much too important to be minimized and simplified by the score on a standardized intelligence test. He goes even further and states:

> ... indeed, I do not believe that it is possible to assess intelligence in a pure form, and the kinds of assessment I favour are entirely different from those associated with IQ testing (1993a, XXVI).

Gardner established his multiple intelligences theory, hereafter (MI), according to carefully selected criteria drawn from a number of disciplines. Two of his criteria

were from biological science, two from logical analysis, two from psychological research and two from traditional psychological research. It is the establishment of these criteria that distinguishes Gardner from other psychologists. Traditionally, Binet and others involved in the creation of standardized intelligence tests, relied wholly on psychological research. The interdisciplinary nature of Gardner's criteria gives MI theory a broader theoretical foundation than the traditional measures of IQ, which rely heavily on linguistic and logical/mathematical intelligence strengths only.

The broad interdisciplinary bases of the criteria Gardner has established to define areas of intelligence are also conducive to the identification of new areas of intelligence. This is evidenced in Gardner's early work (1983), which identified seven areas of intelligence and his more recent writings, which include eight intelligences. Also, as Gardner reflects (2000b,p.45):

> The criteria I presented in 1983 do not represent the last word in the identification of intelligence. Today I might define them differently, and I would stress much more the relevance of cross-cultural evidence.

Gardner's theory now identifies eight intelligences that are shared by everyone. 'These intelligences may be thought of in a neurobiological way' (1993a). In other words, these intelligences are part of the genetic inheritance of the human species. What is significant is that people differ regarding their areas of strengths and weaknesses. No two people are exactly the same. Our intelligence profile is much like a fingerprint, each individual having a combination of strengths, which is unique. To add further complexity to the profile, cultural influences and personal experiences impact on these intelligences constantly changing the nature of the individual's intelligence and their relationship to each other.

Gardner (1999a) offers a new definition of intelligence that stresses the potential of any intelligence.

> Nearly two decades later I offer a more refined definition. I now conceptualize an intelligence as a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture (1999a,p.34).

Like Sternberg (1995) Gardner stresses that the importance of this definition is in the emphasis now placed on the potential of intelligences. For the potential of an individual's intelligences to be realized, they need stimuli, which include cultural values, personal and parental decisions, and the values and decisions of educators have.

Of the eight intelligences identified by Gardner, teachers and educators in traditional schooling more readily accept linguistic and logical/mathematical intelligences as legitimate as they are the mainstay of traditional classrooms.

Nevertheless, MI theory has had enormous impact on all spheres of education. Classrooms in Australia (Vialle, 1997) and America (Gardner & Hatch, 1990; Brougher, 1997; Campbell, 1997; Silver, Strong & Perini, 1997; Stewart, 1999;Martin & Burnette, 2000; Cost & Thurley, 2000;Willis & Johnson, 2001; Simmons, 2001; Adams & Lott, 2001; Kezar, 2001; Reece, 2002;) utilizing Multiple Intelligences Theory (MI) are examples of what is happening in a variety of educational settings around the world.

Professionals at all levels of educational theory and practice (e.g.; McGrath & Noble, 1995a, 1995b, 1998, 2003; Noble, 2002; Hine, 2002; Rafe, undated; Beckman, 2002;)

are advocating the benefits of MI theory in a wide variety of educational settings. MI strategies have been developed for the teaching of gifted students, multicultural education, primary and middle school classrooms, adult education, indeed, any situation that involves the education of a number of individual students.

> MI theory is a way of thinking, it is an attitude about people which allows for similarities and differences. It allows for inclusion and enrichment, for self – esteem building and the development of respect for each individual and the gifts they bring to the classroom (Beckman,2002,p.4).

Perhaps one of the reasons for the widespread acceptance among educators of Gardner's theory of intelligence is that it lends authenticity to what experienced, perceptive teachers already knew- that many students who were not perceived to be successful at school became high achieving, productive members of society who sustain meaningful personal and professional relationships. They were obviously smart in ways other than those recognized by traditional schooling.

Intrapersonal Intelligence

Of the intelligences identified by Gardner (linguistic, logical/mathematical, spatial, musical, bodily kinesthetic, naturalistic, intrapersonal, interpersonal and possibly existential) it is his thoughts on the concept and role of the intrapersonal intelligence, that are of particular interest to this study. Gardner discusses both personal intelligences, the intrapersonal and the interpersonal, for the main part, together, although he does state, 'each form has its characteristic neurological representation and breakdown' (1993a,p.241). He adopted this approach as, in normal environments and conditions, one is not usually developed independently from the other. So, by discussing these intelligences together, he would avoid both an artificial separation of the two, and also any duplication of material related to both intelligences. The

'personal intelligences' are, in many ways, significantly different in nature from the other intelligences, despite meeting the eight criteria that Gardner devised to designate an intelligence.

Firstly, although there are components specific to each, Gardner viewed them as interweaving to form a 'sense of self'. The other intelligences could stand alone. For example, the development of musical intelligence is less reliant on the development of other intelligences compared to interpersonal intelligence and intrapersonal intelligence which have reciprocal interdependence. The other intelligences were also observed to be less dependent on the influence of cultural norms.

The personal intelligences, however, are governed to a greater or lesser degree by these cultural and societal norms- i.e. what is considered 'normal' in one culture or societal group may not be acceptable in another. Furthermore, there was, and still is, a great deal of pressure to build skills and utilize the personal intelligences, as failure to do so may result in inappropriate or unacceptable behaviours, both of which have social, and perhaps even legal consequences. This would not be the case with any of the other intelligences. In addition, various illnesses or pathological conditions may impact upon these intelligences and therefore on the individual's social adaptation and enculturalisation processes. Lack of strength in any other intelligence would not result in the same degree of alienation from the wider community. Finally, Gardner (1993a,p.242) remarks that other cognitive psychologists have largely ignored these intelligences.

Interpersonal intelligence is intelligence about others. Individuals who have considerable capacity in this intelligence are characterized by abilities to cooperate in groups, be instinctively sensitive to the feelings of others, have good communication skills with a variety of people and naturally make distinctions between people easily. In contrast, intrapersonal intelligence is defined by Gardner as

> … the development of the internal aspects of a person. The core capacity at work here is access to one's own feeling life – one's range of affects or emotions: the capacity instantly to effect discriminations among these feelings and, eventually to label them, to enmesh them in symbolic codes, to draw upon them as a means of understanding and guiding one's behaviour (Gardner,1993a, p239-240).

There is evidence of the growing importance that Gardner places on intrapersonal intelligence. Ten years after the original publication, in the Forward to the second edition of 'Frames of Mind' (1993a), Gardner revises only one aspect of one intelligence, the intrapersonal. He states:

> It is pertinent to point out that my notions of intrapersonal intelligence have shifted somewhat in the last decade. In *Frames of Mind* I stressed the extent to which intrapersonal intelligence grew out of, and was organized around, the feeling life of the individual. If I were to rework the relevant parts of Chapter 10 today, I would stress instead the importance of having a viable model of one's self and of being able to draw effectively upon that model in making decisions about one's life.

It is noteworthy that neither this text nor any later texts contain any new emphases on the other intelligences.

The changes that Gardner made as a result of his own reflection on his work are very interesting. By the addition of another dimension to both his criteria and definition of intrapersonal intelligence, he has highlighted again both the evolving nature of his work on intelligence and the impact of introspective thinking. The new emphasis on

intrapersonal intelligence as essential for all individuals, irrespective of the other strengths they have, highlights what may have been, in traditional education, a serious weakness in Western cultures.

Gardner acknowledges the importance of personal choices in the educational process, in particular the role of '..human emotions, personality and cognition'(1999b,p.51). His most interesting assertion, however, concerns cognition and emotion. He states that, although there is a great deal of interest in the working of the mind in academic communities, there has been little investigation into the relationship between 'the understanding of one's own mind…….(and) personal responsibility for one's own education'.

Gardner expands on the idea that the understanding that individuals have about themselves is increasingly important in their educational endeavours, and clearly states:

> Personal knowledge about the mind might furnish people with a sense of agency with respect to their cognitive lives that would have seemed utopian in an earlier era. Metacognition, self-consciousness, intrapersonal intelligence, second order thinking, planning (and revising and reflecting), systemic thinking, and their interrelations need not just be psychological jargon or 'self-help' buzzwords: to put it plainly, individuals can play a far more active role in determining the truth, beauty and goodness that will suffuse their own lives (1999b,p52).

It appears that amongst the many 'forces' that will impact on education, there is one over which individuals may have some control, the capacity to develop individual intrapersonal intelligence and to use this knowledge of self to interpret, moderate and construct meaning from life's experiences. The challenge for educators is clear, but as Gardner indicates, it is an area that has not hitherto attracted a great deal of interest.

In turn, Gardner deems intrapersonal intelligence as increasing important in the Third Millennium workforce. He writes:

> When people did the same work as their predecessors, self knowledge was a luxury if not a burden. Given today's extreme fluidity of jobs, roles, and preferences, it is essential that people have an accurate, up-to-date, and flexible understanding of their own desires, needs, anxieties, and optimal ways of learning. People with particularly strong intrapersonal intelligence are prized in the business world because they can make optimal use of their talents, especially under rapidly changing conditions, and they know best how to mesh their talents with those of their co-workers. In contrast, those with inaccurate self-perceptions behave in nonproductive ways, personally or professionally, and are a burden to a company. It is easier to fire such people than to try and instruct them in knowledge of self. (Gardner,2000c,p.200-201).

Here, Gardner provides perhaps the strongest indicator for educators seeking a rationale for new pedagogy with which to prepare students to take their place in a Third Millennium society- that is to teach students to know themselves well and to have an accurate, sophisticated knowledge of self, giving new emphasis in the ancient wisdom of Plato- *know thyself.*

Yet comparatively little is understood about how both of the personal intelligences operate, (as opposed to linguistic intelligence, for example), how to effectively train people in these intelligences and how to measure these strengths effectively. In addition, these intelligences require appropriate educational and cultural contexts in which to manifest themselves. As noted earlier, they differ from the other intelligences in that they cannot stand alone in the same way that perhaps mathematical/logical intelligence, bodily/kinesethetic intelligence or musical intelligence are able to.

There appears to be little other published writing or research evidence exclusively devoted to promoting these intelligences. Surprisingly little has focused specifically on the importance or the development of intrapersonal intelligence, despite Gardner's increasing conviction that strong intrapersonal intelligence will be vital to individuals' potential to cope successfully in the Knowledge Era. This view may be supported by the inclusion of Kincheloe's (in Pinar, 1998) detailed analysis of Gardner's intrapersonal intelligence in a text that is devoted to exploring new directions in curriculum. In this context Kincheloe argues strongly that the development of strong intrapersonal intelligence will be a vital factor in curriculum issues in the future.

The lack of writing specifically devoted to the development of intrapersonal intelligence may well be because interpersonal and intrapersonal intelligences are difficult to develop in isolation from each other, despite intrapersonal intelligence having quite distinct characteristics of its own. Most authors tend to combine these intelligences, concentrating instead on the personal intelligences. The most well known text specifically relating to the personal intelligences, is the work of Daniel Goleman.

Emotional Intelligence

The work of Goleman (1995) on Emotional Intelligence has a close relationship with Gardner's personal intelligences. Goleman stresses the importance of acknowledging and managing emotions and regulating responses in the social arena and in all aspects of life. Emotional intelligence theory relates conceptually to Gardner's two personal intelligences. Yale psychologist Peter Salovey, the original theorist on Emotional Intelligence, using Gardner's Theory of Multiple Intelligences as a starting point,

expanded Gardner's category of personal intelligence into five main domains that define emotional intelligence:

1. Knowing one's emotions: self-awareness recognizing a feeling as it happens;
2. Managing emotions: handling feelings appropriately;
3. Motivating one's self: emotional self control, delaying self gratification and stifling impulsiveness;
4. Recognising emotions in others: empathy- the fundamental 'people skill'; and
5. Handling relationships: a skill in managing emotions in others.

   (Goleman,1995,p43-44)

A great deal of interest has been, and is continuing to be, displayed by the educational community in emotional intelligence (eg. Rovenger, 2000; Elias &Weissberg, 2000;Thi Lam & Kirby, 2002; Pellitteri, Stern & Nakhutina, 1999; Obiakor, 2001; AbiSamra, 2000). The world of business has also realized the benefits of employees and leaders who display high degrees of emotional intelligence (Rotella, Gold & Andrini, 2002; Smigla & Pastoria, 2000; Segal, 2002; and Lynn, 2002).

Goleman (1995,p40-41) understood that Gardner, as a cognitive psychologist, had emphasized thinking about emotion, rather than emotions themselves and the powerful part that they play in the human mind. Gardner's response refers to his original definition of intrapersonal intelligence.

> When I first wrote about personal intelligences I was talking about emotion, especially in my notion of intrapersonal intelligence one component is emotionally tuning in to yourself. But as it has developed in practice, the theory of multiple intelligences has evolved to focus more on 'metacognition'- that is the awareness of one's mental processes- rather than on a full range of emotional abilities. (Noble and Grant,1997, p.24-25)

However, although emotional intelligence is theoretically linked to intelligences, the terms are not interchangeable. Gardner comments on Goleman's text (1995):

> Interpersonal and intrapersonal intelligences add up to Dan Goleman's emotional intelligence. But I think he goes on to talk about other things like having a certain stance on life… My major quibble with his book is that he kind of collapses description and prescription…I think that Dan wants people to be a certain way……(Noble & Grant, 1997,p 24-26).

The problem with emotional intelligence as presented by Goleman is that it promotes a rather well defined, socially acceptable way of being aware of, understanding, and responding to emotions. Gardner feels that this model of intelligence goes beyond the boundaries of his understanding of intelligences (Noble & Grant, 1997,p 24-26). It is also possible that the prescriptive nature of Goleman's work actually places boundaries on the potential of individuals to develop these intelligences. It is possible that it may even promote a type of homogeneity that is contrary to Gardner's emphasis on the need to find personal meaning and understanding in life.

Other Theorists and Intrapersonal Intelligence

Lazear (1999,p111) presents a definition of the components of intrapersonal intelligence that is closely aligned to that provided by Gardner. He states,

> I like to call intrapersonal intelligence the introspective intelligence for it involves awareness about the self and feelings… Intrapersonal intelligence,……looks inward and knows in and through investigating the self……. Intrapersonal intelligence needs all the other intelligences to express itself, and thus it is an integrator and synthesizer of the other ways of knowing.

Lazear discusses intrapersonal intelligence in the context of contemporary education practices and challenges. He acknowledges the complexity of teaching, and indeed, of life today in societies experiencing increasing rapid transformation and technological

change. He believes that the pace of life in general, the structures in traditional classrooms, the crowded nature of curriculum in schools and the non- introspective inheritance shared by many Western cultures have combined to minimize the development of skills and techniques which would foster the potential of intrapersonal intelligence. He asserts that this has not only been a feature of life in schools, but a characteristic of Western societies in general.

Hine (2002),discusses the possibilities of MI theory in Early Childhood education. Based on the work of Diamond and Feuerstein, her view supports Gardner's view of the pluralistic nature of intelligence and its potential to develop, change and grow. She lists the characteristics of people with high intrapersonal intelligence. This list includes an accurate knowledge of one's own strengths and relative weaknesses, skills in setting and achieving goals, independent thinking, being comfortable being alone and thinking alone, a sense of the 'big' questions in life and a tendency to be introspective, often writing for personal reflection, e.g. journals, diaries etc. Referring to both adults and children high in intrapersonal intelligence, she states, 'they may be the nonconformist individuals who march to their own drummer' (2002,p5).

Other Theories Relating to Students' Perceptions of Self

There are other studies that have focused on the affective component in successful learning. These serve to highlight that there exists a growing awareness that learners' own beliefs about themselves are an important consideration in the educational process.

Bandura (undated, p2) defines self-efficacy as a major component in motivation. He states, ' self- efficacy is the belief in one's capabilities to organize and execute the

sources of action required to manage prospective situations.' In other words, individuals who believe they can cope with new challenges have a high degree of self-efficacy and increase their chances of success. He believes that three types of 'self-influence' underpin motivation. These include how satisfied or not students may be with their current level of performance, how high the self-efficacy levels are for that particular task and their readjustment of goals in relation to their progress. Consequently self – efficacy beliefs link conceptually to intrapersonal intelligence as this self-knowledge has significant impact on motivation and learning outcomes.

Bandura asserts that these beliefs about oneself determine the actual goals individual students set, how much effort they put into achieving that goal, how long they persevere and how resilient they are to failures. Students with high self-efficacy persist for longer, and exert greater efforts if they fail to achieve their goal. It is interesting that he believes that ' perceived coping self – efficacy regulates avoidance behaviour as well. The stronger the sense of self- efficacy, the bolder people are in taking on taxing and threatening tasks' (Undated p.4). This study accentuates the importance of students being motivated by accurate self perceptions, otherwise those with inaccurate self- knowledge are doomed to an increasing demoralizing pattern of not coping well and not succeeding to fulfill their expectations of themselves.

Ng (1998, 2000) researched the impact of self-schema on students' learning behaviours. Self-schema is defined as 'the cognitive generalization of one's self-knowledge in a specific domain from past experiences'(Ng, 998,p.2). Although this understanding of self is much narrower in definition than intrapersonal intelligence, it is interesting that Ng found that self- schema had strong links, not only with the

students' achievement goals, but also with their perceived achievement. Students who observed that they were 'good' students took more control of their learning and gained better results than those who had negative perceptions of themselves as learners. Ng (1998) also states that students who did not know *how* to learn, were not able to increase their performance levels by motivation alone. Ng gives no indications of how students learnt how to learn.

Chan (1992) identifies the importance of the learners having a repertoire of strategies and being able to monitor their use of these strategies in different learning situations. She also cautions against encouraging students to try harder if they do not have appropriate strategies. Once again the information is interesting, but of limited value. Given that each student has a unique blend of intelligences and personal experiences, Chan makes no attempt is made to address the practicality of addressing this student diversity in a classroom.

Each of these writers serves to highlight the importance of intrapersonal intelligence as defined by Gardner. Bandura's self- efficacy could not have been developed without individuals having some knowledge of their relative strengths and weaknesses. Nor could individuals develop a self-schema as discussed by Ng. It is highly unlikely that students would be able to develop and implement a range of personal learning strategies, as Chan advocates, and monitor their progress, if they had not first had the opportunities to build a repertoire of strategies that the student found personally meaningful. These writers appear to focus on the characteristics that can be observed in learners as the result of strong intrapersonal intelligence. Unlike Gardner, they have not first addressed the basic understanding of self that contributes

to the development of these characteristics and therefore each theorist is limited in several ways.

Secondly, these foci themselves are very limited. These writers present their foci as static qualities, commenting on those students who have, or have not, exhibited the characteristic of each study and then evaluating the impact that this had on the students' success as learners. The selection of a single characteristic, such as self-efficacy or self-schema, irrespective of how general the term may be, is only a part of the depth of self- knowledge that is seen by Gardner to be so essential to life long learners. In comparison to Gardner's definition of intrapersonal intelligence, these writings lack both depth and scope.

Thirdly, having defined intrapersonal processing and knowledge as an intelligence, Gardner believes that an individual's self-knowledge has the potential to grow in response to their environmental experiences.

Conclusion

This chapter introduces the notion that high intrapersonal intelligence is crucial to student success in the twenty-first century. A review of the literature by theorists in this area indicated however, that the construct needs to be further explored in terms of how it impacts on educational practice.

Chapter Two

Implications of Intrapersonal Intelligence for Educational Practice

Enhancing strong intrapersonal intelligence may be the means by which individual students gain the confidence and skills to be successful learners both during and after the years of formal education. Developing intrapersonal intelligence in schools has not previously been extensively explored in comparison to, for example, the teaching of reading. Consequently, the most reasonable observation that can be made is that currently, much educational practice does not systematically promote or enhance self-knowledge of students. Traditional educational practices that encourage rote learning, determine one correct method of gaining understanding and promote a 'one size fits all' education cannot easily facilitate the development of intrapersonal intelligence and hence potentially limit the chances of educational success for all students.

Studies That Focus on The Personal Intelligences

Although not extensive in number, some studies have been conducted that consider the importance of intrapersonal intelligence for student success, either as a component of the personal intelligences, or as a separate entity.

Le-Page-Lees (1997) in her research into the achievements of women who were disadvantaged as children, concluded that women who achieved well despite the disadvantages were highly resilient and had developed a high level of interpersonal and intrapersonal intelligence. Despite Le-Page Lees' use of the terms 'emotional intelligence' and Gardner's personal intelligences interchangeably, her study showed that the women's achievement levels increased as their knowledge of self deepened.

Johnson (2000) considers the affective component in the teaching of the gifted. She identifies the most common understandings of 'affective components in a curriculum', and adds that it has close connections to two of Gardner's MI domains, the personal intelligences. She outlines ways in which teachers can incorporate an affective component into their practice and concludes that this effective practice will enable gifted students to have some say in their educational processes and give them some responsibility. Unfortunately, the implication from this study is that this 'affective education' may be beneficial for gifted students only.

Shepard, Fasko & Osborne (1999) specifically studied the importance of intrapersonal intelligence in thinking and learning. They link intrapersonal intelligence directly to self-image, self-efficacy and to greater levels of achievement. They also realize that it is vital for successfully adapting to change.

> In short, intrapersonal intelligence may be thought of as a formal attempt to include the affective, feeling side of human nature to the intelligence equation. By recognizing that human beings are something more than the logical demands of daily life, issues such as motivation and personal identity may be considered as being integral to the process of adapting to one's environment(1999.p.3).

It is interesting to note that the authors include self-regulation as an important construct. They believe that it is the understanding each student has of self that affects their performance, whilst at the same time regulating it.

Personal Intelligences and Classroom Practice

Amongst those who have investigated the importance of personal intelligences for the classroom practitioner, Ellison (2001, 1992) identifies both these intelligences as

'critical' for learning. She observes their importance in decision- making, anticipating and evaluating responses and self- management.

> The truth is that if we want children to take responsibility for their behaviour, we must first give them responsibility and plenty of it. The way a child learns how to make decisions is by making decisions, not by following directions (Kohn in Ellison, 2001,p.134).

She sees strong personal intelligences as most useful and desirable life skills, but states they are frequently not explicitly taught to students, especially as young learners. Indeed, much educational practice denies students the opportunities to practise these skills, especially those involving decision-making.

Ellison (2001) is enthusiastic about the development of personal intelligences in her students. She describes strategies she has used in her classroom to promote these intelligences, believing, that students who have poor skills in this intelligence are more difficult to educate. Unfortunately, there is no clear indication in her writing of how intrapersonal intelligence itself may be catalytic in regards to educating students to be more appropriately prepared to meet the demands that will be placed upon them in the future.

Riley (1999) in a discussion of the education of gifted children in the future, states that the gap between theory and practice needs to be lessened. She emphasized the need for practice and research to inform each other; an interaction that has not always happened in the past. She attributes this to the problem of schools changing too little and too slowly. Indications are that a complete paradigm shift in the educational world will be the only answer. This is a view shared by others, including Teele who states:

> In the national school reform movement a major goal should be to consider creating schooling environments that allow students to learn basic skills that are applicable to real life situations, proceed at a rate that is achievable for them, makes no unfair comparisons with the progress of others, assures positive reinforcement and provides curriculum instruction and assessment procedures that reflect the learning styles of all students (Teele (1994,p.1).

In making this recommendation, Teele advocated that consideration be given to MI theory in order to reach this goal, which itself represents a paradigm shift in the whole notion of how formal education is organized, delivered and evaluated. There is no direct reference to the importance of intrapersonal intelligence and the development of students' skills in determining their own learning strategies and preferences, but there is an implicit acknowledgement of the importance of individual differences being catered for within the school system in order to ensure success for all students.

Gardner, however, has already made very definite links between intrapersonal intelligence and its potential to empower students to take responsibility for their own learning. He contends that it will be very important for them to do this.

> With knowledge changing so rapidly, students must become able-eager- to assume responsibility for their learning…. To the extent that students can craft their own goals, keep track of their own accomplishments, reflect on their own thinking and learning- where it has improved, where it continues to fall short- they become partners in their own learning. Even more crucially, once formal schooling has concluded, it should have become second nature for adults to keep on learning- sometimes alone, sometimes in groups- for as long as they choose; indeed, one hopes for the rest of their lives (Gardner, 1999a, p.135).

He clearly indicates that these life skills of setting own goals, making decisions in relation to these goals and reflecting and evaluating own progress, should begin in the formal educational environment.

Conclusion

This chapter investigated some evidence of the impact of the personal intelligence domains in current practice. Although there appears to be a growing awareness of the potential benefits of strong self-knowledge for students, no clear understanding emerged regarding the promotion and enhancement of this intelligence in educational practice. Nor was it evident from the literature discussed that writers other than Gardner viewed the development of intrapersonal intelligence specifically as vital to the success of learners in the future. How Gardner's perspective corresponds to the needs of learners in the future warrants investigation.

Chapter Three

Educating for the Future

Although change in society is increasingly rapid and determining the best possible direction in which to develop educational practices and procedures is difficult, there are some very clear indicators emerging. These indicators support Gardner's emphasis on the importance of understanding one's own mind and using this knowledge to take responsibility for one's own education.

Beare (2003) identifies seven 'radical differences' that will characterize schools of the future. One of these is pertinent to this study; the re-conceptualization of the curriculum. He envisages a new curriculum that necessitates team searching and learning, multi-level thinking and increasingly complex questions and answers. This curriculum integrates disciplines and areas of knowledge formerly studied in isolation from each other. It will not be age related, as curriculum has been in the past and students will be able to respond to this in terms of their own individual interests, needs and competencies. However, it would appears that this new curriculum identified by Beare will be extremely difficult to implement unless the students have already developed strong intrapersonal and interpersonal intelligences.

Lepani (1995,p.1-2), also examines future trends and concludes that minor reforms to the existing educational system are not going to be substantial enough to guarantee success for all learners. She gathers together current educational theory relating to educating for the future and proposes eight principles on which to develop a 'mind

ware industry', that is, upon which to enhance the learning capacity of the human mind in order to cope with the increasing demands of the 'Knowledge Era'. These are

1. Lifelong learning…if learners do not enjoy learning and how to learn they are crippled for life.
2. Learning to learn….Capacity to diagnose learning preferences and develop appropriate learning strategies
3. Customized……..Global products need to be customized at the user-interface by learner/teacher to meet cultural, physical, intellectual differences.
4. Learner-directed……The learner influences the learning strategies in consultation with the providers
5. Transformative……..Enables learners to challenge and change belief systems and behaviour patterns, including development of systems thinking capability
6. Contextualised……Prepositional learning is founded in experience and application
7. Collaborative/cooperative. Team based learning skills
8. Just in time…….Core knowledge and learning architecture to enable access to information, and ability to construct knowledge where and when the learner/teacher needs it.

These eight, new paradigm principles are underpinned by valid intrapersonal intelligence.

' *Lifelong learning* is becoming a necessity, not just a mellifluous phrase' Gardner, (1999b, p52). In order to become a life-long learner each student needs to know about themselves as learners. Strong intrapersonal intelligence provides students with the information they need to make appropriate choices in relation to how and when they need to learn, in addition to making choices that will give them the opportunities to enjoy what, and how, they are learning.

Learning to learn can only occur as the direct result of students utilizing their self-knowledge. Each student needs to have accurate information regarding their own relative strengths and weaknesses in order to determine their learning preferences and

the learning strategies that have the potential to be successful for them in the given situation. Students also require strong intrapersonal knowledge in order to devise strategies that allow them successful outcomes. Working from an area of strength it is possible to overcome weaker areas.

Likewise, it is difficult to customize learning to suit individual students if the students themselves are unable to articulate their learning needs and preferences. If students do not possess strong self-knowledge, or are unable to communicate their self-knowledge sufficiently well, then the efforts of the teacher to adapt resources, products and practices to accommodate individual students' learning preferences will be severely hampered. This jeopardizes students' chances of success. It also effectively minimizes students' chances to participate in the collaborative planning process and renders them powerless to play a role in organizing, managing or monitoring their own learning, including the setting of own goals.

The Importance of Goal-Setting

Students' capacity to set goals provides them with the opportunity to access and develop skills in the first four principles that Lepani (1995) believes enhance the capacity of the human mind. Gardner (1999a, p.113) also recognizes their importance. He states, 'goals must come first and they must be kept in mind.'

Greenwald (2000) finds Problem Based Learning an effective process in the science classroom. The students were required to take the major responsibility for the content and process, i.e. what is learnt and how. In order to establish this practice initially, Greenwald finds it important to highlight the individual nature of thinking and

learning, for each student to establish knowledge of their own individual learning preferences and for them to decide what they wanted and needed to know to be able to take each step of the way. He found that goal- setting was one effective method of doing this.

Kaplan & Maehr (1999) discuss goal setting in the context of promoting higher achievement in the performance of African American students. They discovered that student achievement goals, those which aimed at improving individual progress in learning, were more successful at promoting well-being and academic success than 'ego goals'. They identified 'ego goals' as those that were constructed and pursued in order to excel, with the purpose of beating or 'besting' others. Oppenheimer (2001) agreed that research studies had assisted in identifying that the characteristics of the most successful goals were the same as those for achievement goals. Those studies found that goals are motivational and lead to increased performance when they are specific, moderately difficult, and accepted by the individual and when feedback is provided regarding progress toward achievement of the goals.

Educationalists from different areas such Bloom and Krathwohl (1964), and Ellison (1992) advocated students' writing specific learning objectives. This type of goal setting is evidenced in the SMART goal setting process utilized by McGrath & Noble. (2003) as part of their program designed to develop resilience in students (Appendix A, Page 142).

Bandura (undated), believes that appropriate, challenging goals sustain and increase student motivation. Their achievement of their goals is largely due to personal

influence as opposed to outside influences. Others cannot realistically regulate the time or manner in which personal goals are pursued. Motivation based on goal setting involves a comparative cognitive process, which then determines that self- satisfaction is conditional on achieving the set goal. It is this self- satisfaction that drives people to persist in their efforts and moderate their behaviours in order to achieve their goals. Much of the value of goal setting in an educational context lies in the fact that this intrinsic reward of self -satisfaction is frequently of much more value and importance than any extrinsic reward or punishment. This intrinsic value of achieving goals may also be valuable in the development of self -directed learners.

Self-Directed Learning

Developing well- prepared and motivated students, could, for many educators, be perceived to be an overwhelming task. Motivating all students to achieve in an educational setting requires teachers to recognize and encourage individual students, value their preferences and provide environments that promote the characteristics of motivated, self –directed learners. Patterson, Crooks & Lunyk-Child (2002) have developed a new perspective on self-directed learning. They have established six competencies that characterize self-directed learners. They define self-directed learning as

> a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes(2002, p1).

Written in the context of addressing the needs of baccalaureate nursing students, the writers state that they believe proactive students learn more effectively than passive

students. Although the learning environment may differ from a school classroom situation, the desired outcomes are the same, to maximize the potential of students, and allow them to take responsibility for the learning by learning about themselves. The degree of self-knowledge required to establish one's self as a self- directed learner with these competencies, at any level of academic endeavour, is extremely sophisticated.

Patterson, Crooks and Lunyk-Child (2002) regard self-reflection as a very important component of self-directed learning. It assists students to identify their own strengths and relative weaknesses. It allows them to articulate their feelings about those issues that cause them discomfort in the learning situation. Three levels of reflection were identified.

The first level is the ' content reflection' that identifies students in the process of doing just that- describing what's happening in concrete, non-personal terms. Reflection at the next level seeks to do more than describe. At the second level relationships between new knowledge and previously learned knowledge are established, then used in coping with new learning situations.

The third level of reflection is described as the 'premise' reflection and relates closely to Lepani's 'transformational' learning and Kincheloe's 'creation of integrated knowledge'. The students at this stage are capable of internalizing knowledge, a phase which the authors define as ' …transformation of meaning in which knowledge is made one's own' (2002, p.6). Gardner (1999a), and Lepani (1995) agree that this

stage is extremely significant as it empowers students to devise strategies to cope with new demands and opportunities and to overcome limitations. Lepani states that

> fundamental to knowledge productivity through innovation is the ability to challenge existing paradigms in response to new knowledge and new environmental circumstances, as well as the ability to make constant incremental changes within a dominant paradigm, whether of a knowledge discipline, an institutional framework, or organizational design of work and processes (1995,p.11).

Students at the third level are skilled in challenging the validity of their prior learning. They are concerned with determining underlying reasons and seeking and pursuing multiple perspectives and alternative ways of thinking. They are capable of deep thinking introspectively and can critically assess the strengths and limitations of themselves as learners. These characteristics of self- reflection are also some of the characteristics of sophisticated intrapersonal intelligence. As Gardner reminds educators frequently, it is increasingly important that students gain a deep understanding of themselves and use these understandings to guide their decision-making. It appears that these reflective strategies used to encourage self -directed learning have much to offer educators wishing to assist their students in the development of self –knowledge, particularly in the process of developing metacognition.

Metacognition

Metacognition, (one of the words Gardner described as 'buzzwords' 1999a,p.52,) has generated a great deal of literature in the educational world, (e.g. the writings of Gillies, Walker & Bailey, (1995): Sheppard & Kanevsky, (1999): Hall, Myers & Bowman: (1999), Antonietti, Iganzi & Perego, (2000): Blank,(2000): Desoete, Roeyers & Buysse, (2001): Pugalee, (2001): These studies and others reflect the

interest in the processes of promoting metacognitive skills in a wide variety of educational settings and attempts to measure the skills themselves. They also reflect the international interest in metacognition. There are many definitions, some simple, others much more comprehensive. Indeed, every author seems to interpret the subtleties differently and has formulated a definition to be used in reference to their particular study. Many include practical suggestions for teachers regarding the promotion of these skills.

Schraw (in Hartman, 2001) emphasizes the need for teachers and students to recognize the differences between metacognition and cognition if students are to become self-regulated. Interestingly, he also states that ' frequently students are better able to model cognitive and metacognitive skills, and provide powerful rationale for these skills within the students' zone of proximal development, compared to teachers' (in Hartman, 2001, p.8). He also emphasizes the role of reflection, determining that it is crucial to the metacognitive process. Maitland (2000) also observed the links between metacognitive strategies and self- regulation.

Dewar (1997) highlights the importance of intrapersonal intelligence in metacognition. She writes about the process of ' learning to learn' requiring deep self knowledge, reflection, action and interaction, listing amongst her own tools that she has used over the years ' journaling, visualization, metaphor, spiritual practices, reflection, continual questioning, dialogue/discussion with others and reframing experiences from a number of perspectives' (1997,p1). This, in fact, could be a list of strategies used expressly to develop intrapersonal intelligence! Journaling has proven to be particularly effective in the promotion of reflective practices in a wide variety of

learning environments, from adults to kindergarten students (Garmon, 2001, Glasgow, 1999, Hannon,1999, Morningstar,1999, Medley, 1999, Hand & Keys, 1999,Glazer,1999, Manning,1999, Pressick- Kilborn and Weiss, 2001).

Many writers and theorists place emphasis on the perspective of the learner and the identification of this process as purposeful learning. Livingston (1997) discusses metacognitive knowledge, i.e. knowledge of person variables, knowledge of task variables, knowledge of strategy variables, and metacognitive regulation, the self questioning that checks and critiques the resultant answers. Working from direct reference to Flavell, she discusses the complexity of separating the interrelatedness of cognition and metacognition. The answer, she suggests, lies in how information is used.

Lipman (2001), in a discussion promoting teaching strategies which support the development of metacognition, alerts teachers to the fact that effective skills can be taught to all students, not just the 'bright' ones. He advocates allowing students to be responsible for their methods of learning, stating that this facilitates both the desire and the competence that students need to become life long learners. Hennessey's (1999) study produced data that supported the hypotheses that young children, (from five years onwards), are capable of developing metacognitive strategies, and that children's metacognitive ability is multifaceted (1999,p.1).

Sternberg (in Hartman, 2001) demands that metacognition, like other abilities, is perceived to be a constantly developing, and is not a fixed construct. He also contends that metacognition has an important role to play in establishing student expertise, but

that it is only part of the range of abilities that ensure student success in academic endeavours. He views metacognition as diverse – as including complex constructs such as understanding and control of a range of cognitive processes. He asserts that metacognition interacts with other personal differences such as other 'abilities, personality, learning style and so on' (2001, p.248). He offers a realistic perspective in relation to metacognition and students. He observes that students have, in the past, been rewarded for passive learning, and the challenge now is to interest students in active metacognitive procedures.

A significant difference between the old and the Revised *Metacognitive Knowledge* Bloom's Taxonomy is a new focus on metacognition (Anderson and Krathwohl, 2000). In the new revision Anderson and Krathwohl add another Knowledge domain to the three already identified in the original text (Bloom and Krathwohl, 1964). The four Knowledge areas in the revised text (Anderson and Krathwohl, 2000) are now *Factual Knowledge, Conceptual Knowledge, Procedural Knowledge and Metacognitive Knowledge*. *Metacognitive Knowledge* includes students' knowledge of general strategies for learning (strategic knowledge), student knowledge of cognitive tasks themselves, when and why to use certain of the aforementioned strategies, (knowledge about cognitive tasks), and self- knowledge, which relates to '…both cognitive and motivational components of performance'(2000, p56). It appears that metacognitive skills cannot be developed without strong self-knowledge.

The Revised Bloom's Taxonomy (Anderson and Krathwohl, 2000) also incorporates some subtle changes that reflect current pedagogical thinking and an awareness of the need to accommodate learners in the Knowledge society. Anderson and Krathwohl's

(2000) revision of Bloom's original Taxonomy of cognitive process (Bloom and Krathwohl, 1964) facilitates the use of the original concepts in contemporary educational environments. The revision incorporates several changes that reflect shifting perspectives in educational thinking.

One of these changes involves the naming of the categories of cognitive processes that comprise the Taxonomy. The cognitive processes in the original Taxonomy are identified using nouns, for example *Knowledge*. This label reflects the importance formerly placed on awareness of content. In the Revised Taxonomy, *Knowledge* has been renamed *Remember* and the other categories of the Taxonomy have also been similarly altered to verbs in order to clarify that the current focus is on the processes of thinking. Another other difference is that the categories themselves have undergone some changes.

Some of the skills that were formerly included in *Analysis* are now included in the Lower Order Thinking section of *Understand*. This is a reflection of the need for students in the Third Millennium to develop increasingly sophisticated thinking strategies and to develop metacognitive skills. Third Millennium students need to develop deeper levels of critical and creative thinking in order to cope successfully with the increasing amount of new knowledge that is available to them. The change in the order of *Synthesis* and *Evaluation,* which have now become *Evaluate* and *Create* in the Revised Taxonomy, raises the profile of creative thinking in current educational theory.

McGrath and Noble (1995a) combined the two typologies of Multiple Intelligences Theory and Bloom's Taxonomy to provide practitioners with a useful matrix or tool to meet the needs of all learners and to systematically promote the development of Higher Order Thinking skills across the different intelligence domains. Although this text did not specifically promote intrapersonal intelligence to the exclusion of the other domains, it was certainly underpinned by the need for students to recognize their relative strengths and limitations and includes questionnaires suitable for students of all ages in order to assist teachers and students in the process of identifying these learning preferences.

The Bloom's /Gardner's matrix which was created in this work allowed teachers to plan effectively for all learners and differentiate the curriculum, both in process and content (Tomlinson, 1999, 2000a, 2000b). It also gave direction to practitioners wishing to implement strategies that supported students' learning preferences and facilitated more child- centered practices in classrooms. In this combination of the familiar (Bloom's Taxonomy of Cognitive Processes) and the more recent theory (Gardner's Multiple Intelligences Theory) McGrath and Noble (1995) asserted that accurate self-knowledge actually facilitated the development of successful learning for a wide variety of students.

The development of accurate intrapersonal intelligence is a foundation of McGrath and Noble's (2003) more recent work. One curriculum unit titled *Success* in this new work incorporates strategies to assist practitioners promote resilience in their students. The unit includes goal – setting and strategies for individual students to identify their own learning preferences. This unit also provides a tool (*Multiple Intelligences*

Questionnaire, Appendix A, p.138) from which to develop students' *Multiple Intelligence Profiles* (Appendix A, p. 137). These *Multiple Intelligences Profiles* (Appendix A, page 137), then serve as the basis from which to develop a range of student skills and strategies. The key concepts of this unit also guide this project and some of the unit's activities are incorporated into the intervention program.

Conclusion

At the beginning of the Third Millennium a clear trend is emerging in the literature; students' accurate self- knowledge is essential in order to develop the characteristics of those successful in the 'Knowledge Era'. Students need to have accurate self – knowledge and be able to determine what motivates them as individual learners. Students who enjoy learning and know how they learn best are frequently self-directed learners.

Self-directed learners are able to recognize how they learn and which strategies are useful for them as individual learners. They have the skills to monitor their own progress and constantly adapt strategies and procedures to facilitate their own learning. A major challenge to educators now and in the future will be the design and implementation of programs that will promote students' intrapersonal intelligence and facilitate its further development in the teaching and learning environment.

Chapter Four

The Study and the Setting

Research Design

Action research methodology was employed in this study because of the need for constant revision of the plan of action, the freedom it allows in the determination of the research focus and the opportunities it affords to engage in professional growth. Mills (2000, p.6) defines action research.

> Action research is any systematic inquiry conducted by teacher researchers, principals, school counselors, or other stakeholders in the teaching and learning environment, to gather information about the ways their particular schools operate, how they teach and how well their students learn. This information is gathered with the goals of changing insight, developing reflective practice, effecting positive changes in the school environment and (and on educational practices in general), and on improving student outcomes and the lives of those involved.

Action research provided an opportunity for the teacher/researcher and the colleague teachers to gain new understandings about the learning preferences of their students and challenge existing practices. It allowed for professional development within teachers' own classrooms because this research model empowered the teachers to provide more appropriate learning environment for their students as a result of their reflective practices, observations and evaluations.

Action research was the most appropriate research design for this project because the aims of the study were to act on the teacher/researcher's and the colleague teachers' findings and develop strategies to facilitate more positive learning outcomes for the students. This design was also the most compatible with both the school ethos and

policies and the beliefs held by the teacher/researcher and the colleague teachers regarding child- centered education.

Research Focus

The purpose of this study was to provide evidence that a program of skills and strategies designed to nurture and develop intrapersonal skills in individual students would impact positively on their academic performance in the classroom. More specifically, this ten month research project sought to provide evidence that the students would increasingly demonstrate more self-directed learning, have improved self- monitoring skills, and have developed deeper self – awareness of themselves as learners. The research hypotheses were:

- **That students will improve their skills in defining new learning goals in English.**
- **That students will demonstrate better skills in articulating how they can achieve their own learning goals in English.**
- **That students will demonstrate better skills at: staying on task in English, persevering when the task became difficult, and completing work tasks.**
- **That students will develop better understanding of their relative strengths and limitations as defined by Gardner's intrapersonal intelligence.**

Issues of Validity and Reliability

Internal Validity

As action research is planned by teachers for teachers (Mills, 2000, p.6) and therefore designed for specific situations, then it can really only have internal validity. Burns (2000,p.357) states

> Internal validity is concerned with the question, 'Do the experimental treatments, in fact, make a difference in the specific experiments under scrutiny, or can the differences be ascribed to other factors?'

Internal validity then is a matter of establishing that the interventions that are put in place by the teacher researcher and the colleague teachers are, in fact, responsible for the changes that are observed in the students. Guba (in Mills, 2000, p. 73-74) suggests that particular methods of working can assist the researcher to establish this credibility and dependability.

Guba (in Mills, 2000, p.73-74) recommends that being present in the research environment for extended periods of time is important. He states that studying the students regularly and consistently allows teacher/researchers to develop a more holistic understanding of these students. The role of the colleague teachers is also seen to be important in the reflection process. Triangulation of data is another means by which the internal validity of the project can be established. Wolcott, (in Mills, 2000, p.49) states '…the strength of any qualitative research lies in its triangulation, collecting information in many ways rather than relying solely on one' (Wolcott, 1988).

The design of this study reflects attention to these methods of establishing internal validity or credibility. The teacher/researcher was part of the same school community as the colleague teachers and the students in the study and was familiar with the

students in a variety of school contexts. The colleague teachers and the teacher/researcher were able to collect formative assessment records and vignettes of their students over an extended period of time (ten months). The research tools allowed for data to be collected from the students, colleague teachers and teacher/researcher.

Data was collected from what the students said in the Student Interview (Appendix A, p. 144), from their record of reflections in their Learning Logs (Appendix A, p. 147) and from their self-knowledge as recorded on their Multiple Intelligences Profiles (Appendix A, p.141). In addition, data relating to what students do was available, about both setting their goals on The SMART Goal Contract (Appendix A, p. 146), and the strategies they used to achieve their goals.

Colleague teachers compiled formative assessment records and collected anecdotal records as an important component of students' learning profiles. Many of these were the results of sustained observation. Specific aspects of these were summarised and the data recorded as responses to The Teacher Interview Form (Appendix A, p. 145). The teacher/researcher also had opportunities to compile records from sustained observation and interaction with the students. In addition, the ongoing collaboration and discussion amongst the three teachers provided the teacher/researcher with advantages of having two 'critical friends'.

Each contribution to the evidence could be checked against a contribution from another source, or established using a different research tool. In this manner the final

results for discussion can be more confidently claimed as the effects of the intervention program implemented.

External Validity

External validity, however, is not easily established in action research. Burns (2000, p. 357) says 'External validity, on the other hand, asks the question, 'Given these demonstrable effects, to what populations or settings can they be generalised?' In order to establish external validity for this project, other teachers would have to identify similarities between their own student group and the group that formed the students in this study. They would then have to establish that the intervention implemented in this study would improve student learning in their situation, implement the intervention measures and then assess the effect of that action. Until that process was established, no general application of the research study could be determined.

Reliability

Mills (2000, p. 90) defines reliability as '..the measure of the consistency with which our data measure what we are attempting to measure over time.' The reliability of the study can be established by discussing the nature of the measures and tools that are used to gather the information. The *Multiple Intelligences Profile* (Appendix A, page 141) was used as a pre- and post- test, utilising the 'test-retest' approach (Burns, 2000, p.339). The same person administered it under the same conditions on both occasions. The profile had been independently developed (McGrath and Noble, 2003) specifically to indicate individual students' perceptions of their relative strengths and

limitations. Internal and external reliability can be established for this research tool as it was used in this study to measure the exact constructs for which it was designed and, as an independently designed measure could easily be used to reliably indicate these relative strengths and limitations in other studies if implemented in exactly the same manner.

The Multiple Intelligences Questionnaire (McGrath and Noble, 2003:Appendix A, page 142) which facilitates the compilation of *The Multiple Intelligences Profile* (Appendix A, page 141) was also designed independently for expressly that purpose and could also be used in other situations.

The *Checklist of Student Self Management and Behaviours* (Appendix A, page 143) did not prove to be a reliable research tool. In addition to the impracticality that became apparent in the implementation of this tool, the data obtained from its early use were discounted as extraneous factors effected the information, rendering it unreliable.

The Student Interview Form (Appendix A, page 144) had been developed as the standard interview that was repeated three times throughout the study. On each occasion the interviewer and the method of recording information remained the same. Considered to be a reliable measure for this study, that is to have internal reliability, it may also have external reliability if implemented in the same manner and in a similar context.

The *Teacher Interview Form* (Appendix A, page 145) resulted in information being made available from the colleague teachers' assessments and anecdotal records. This information was directly related to the research hypotheses. The scoring criteria were developed as a collaborative task by the teacher/researcher and the colleague teachers. Although observation may not be totally free from subjectivity, the criteria were clearly defined and commonly understood by the colleague teachers and the teacher/researcher in an endeavour to establish internal reliability. The detail in which the criteria were discussed may allow external reliability to be established also.

The SMART Goal Contract (McGrath and Noble, 2003:Appendix A, page 146) was independently developed and clearly presented to the students. Each section was clearly explained and, provided that the implementation procedures were adhered to, this may be considered to be both internally and externally reliable. *The Goals Flip Book*, as a variation of *The SMART Goal Contract* (Appendix A, page 146) is also considered to be reliable internally and externally as it also indicated clearly whether or not the students were able to develop specific learning goals.

The Student Learning Log (Appendix A, page 147) and the accompanying scoring criteria that were applied to each entry in *The Student Learning Log* (Appendix A, page 147) left little room for ambiguity. The categories that attracted each of the scores were specific and this precision provided its internal reliability. As it contains clear delineation between what is truly reflective in a metacognitive sense, it may also be considered to have external reliability.

The School

The research project was implemented in a country, systemic catholic school. The area is economically depressed and the school clientele includes a very small percentage of professional parents. Despite this, or perhaps because of this, education and academic achievement are of high importance to the community as the traditional mining occupations of those living in the area are already diminishing or totally disappearing. The use of technology in the school is not extensive, as the budget does not permit the purchase of enough equipment to meet the needs of the student population adequately.

The total student population is approximately 350 students. The school is organized in Stages and classes are multi-aged in these groups with the exception of Early Stage One, which operates as two regular, traditional classes. There are four home groups per stage. Students are 'loosely' performance grouped for two KLAs, Mathematics and English. These groupings are flexible. The criteria for group selection includes teachers' observations of children's skills in decoding, communication and other language based skills, and students' capacity for using the Higher Order Thinking skills in their work. No school- based standardized testing is used in the selection process.

Teachers meet together in Stage teams and discuss the students' individual needs in each KLA, referring to all the available information from the Ongoing Assessment Books. These are designed to record student achievement in terms of the Outcomes prescribed by the New South Wales Board of Studies in each of the syllabus documents. The achievements are recorded in terms of indicators, both from the

relevant documents and teacher made indicators. The students' progress in each outcome is determined by observation, conferencing and product analysis and is recorded in the assessment books in the following terms; not evident, emerging, developing or consolidated. One group of students selected as a participant group in this study had exhibited little progress in English according to the records in the Assessment book for the previous year.

The information available includes the information from the Special Education Advisor and other professional bodies where applicable. From this process students are recommended for placement in various groups, considering also the students' social and emotional needs and any other facts that may impact on the student's potential to learn successfully in that environment. Students may transfer from one group to another within a term or a year, depending on their needs.

They may also join a group in another stage for one KLA and return to their own stage for another KLA. The curriculum is differentiated to cater for individual student's preferences and needs. All teaching and learning activities in all Key Learning Areas are developed using the Bloom's/ Gardner's matrix (McGrath and Noble, 1995, revised Noble 2000) and the syllabus outcomes and indicators. Students use no textbooks and the use of proforma worksheets is limited.

The two colleague teachers involved in the project have different professional profiles. One is an experienced teacher, with 25 years experience, whose professional challenges have included working in a variety of socio – economic environments, teaching special needs students and facilitating learning in a constructivist classroom.

The second teacher has recently graduated and has 2 years professional experience. This included experience teaching in a constructivist classroom. Both teachers exhibited a commitment to the provision of flexible teaching and learning environments that facilitate a variety of student learning needs and preferences. Both were interested in developing new strategies and ideas in collaboration with the teacher/researcher in order to promote accurate student self – knowledge, and displayed the openness necessary to allow students to explore the most successful ways for each to become successful learners, take risks and negotiate the classroom environment. The teacher/researcher had 28 years classroom experience and welcomed the opportunity to investigate the possibilities of further supporting student learning in the school environment.

The role of the teacher/researcher in this project was to visit both the colleague teachers and their English classes at regular intervals to introduce activities from *The Intervention Program*, (Appendix B, page 150) to participate in discussions related to students' needs and to continually plan activities to meet these needs. The English area was chosen for the research project as it was considered to be a skill essential for success in other areas of the curriculum. The colleague teachers continued the activities with their English classes after the initial introduction and regularly met with the teacher/researcher to discuss progress or difficulties.

In this manner the teacher/researcher and the colleague teachers worked together as a team in the diagnostic phase, implementation of the planned action and the modifications made to the design as the study progressed. They also collaborated in

the gathering of data for formative assessment and together analyzed the effects of the planned intervention on student progress.

The students in this study were members of two classes of Stage two students and one Stage one child. (Formerly known as Year Three and Year Four and one child from Year Two). The students were aged from 7 years to 9 years old. One class had twenty-five students, eleven of which were in this study. The other class comprised of twenty-eight students, sixteen of which were in this study. There were considerable general differences between the two groups of students, and amongst the individual students themselves. They could be generally described as average and below average performance groups in terms of their achievements on the Board of Studies English Outcomes. The below average performance group consisted of students whose records showed that they were experiencing on-going difficulties acquiring language skills, including basic skills in decoding, phonemic awareness, spelling, writing and comprehension.

At the commencement of the school year, the two teachers who had agreed to be colleagues in the project assisted the teacher/researcher by identifying particular areas in which the participating students were experiencing difficulties. These included poor skills in listening, getting organized and remaining on task. These teacher observations were validated by the findings of specialist educational support staff, and other specialists.

Amongst the 27 students across the two classes, the following considerations were considered to be significant. One child was medicated for Attention Deficit Disorder,

six students were receiving regular counseling from the school psychologist, two students had receptive and expressive language scores low enough to qualify them for additional support and four students wore prescription glasses for recently diagnosed eye conditions that were not able to be identified by basic eye screening procedures.

Thirteen of the students were observed by teachers and support staff as having formulated an image of themselves as unsuccessful learners that was reflected in their lack of involvement, interest and commitment in English. They appeared to have concluded that, as they were not as successful as others in English, it was frequently pointless to continue trying. In this group, some students had been observed by the teacher/researcher and colleague teachers as displaying learned helplessness –they would not attempt a task without one- to- one adult support. This helplessness was manifested by the students in a variety of ways. These ways included not attempting a writing task without being told exactly what to write, sitting without the necessary equipment, i.e. pencils, books, reader, ect. for extended periods of time and simply refusing to attempt or complete any given task. Similar observations of these students were recorded by previous teachers.

Interestingly, another distinguishing characteristic observed and recorded by teachers prior to the commencement of the study was the students' lack of organizational skills. Some students in each group regularly arrived after the start of the lesson, regularly mislaid their workbooks, even though these books were the ones that should not have left the classroom, and generally found starting any task difficult. Frequently, the impact of this initial lack of purposeful activity set the tone for the entire lesson. These students frequently did not successfully complete any learning

activity during the entire lesson. As the result of the information gathered at this diagnostic stage, the research hypotheses were developed.

Details of The Research Instruments

These research instruments were used to gather information regarding the students' progress and responses.

- **Multiple Intelligences Profile*
- **Multiple Intelligences Questionnaire*
- *A Checklist of Student Self-Management and Behaviour*
- *A Student Interview Form*
- *A Teacher Interview Form*
- **A Smart Goal Contract*
- *Student Learning Log*
- *My Goals Flip Book*

The research instruments indicated *, were sourced from the *Book 2 of Bounce Back!* (McGrath & Noble, 2003).

The *Multiple Intelligences Profile* (Appendix A, page141) was selected to provide a clear indication of the students' own perceptions of their relative strengths and limitations. It was compiled in response to the questions posed by the *Multiple Intelligences Questionnaire* (Appendix A, page142). The *Multiple Intelligences Questionnaire* (Appendix A, page 142) consisted of thirty- two questions relating to Gardner's Multiple Intelligences. There were four questions relating to different aspects of each of the eight intelligences. The questions were not grouped; they were

arranged randomly. Students were instructed to consider if their answer to each question would be 'yes' or 'no'. Each affirmative answer was acknowledged by the collection of a piece of paper in a pre-designated colour. (Each of the eight intelligences was assigned a different colour.) For example, all the questions relating to self- intelligence were identified by the receipt of a square of yellow paper, questions relating to body intelligence were identified by squares of brown paper etc.

At the conclusion of the questionnaire the students organized their collection of squares into a column graph, using a different colour for each column. These individual graphs provided a pictorial representation of the students' relative strengths and limitations and were known as the *Multiple Intelligences Profiles* (Appendix A page141). As all the squares were the same size, the graphs needed little explanation. The tallest columns were obviously the students' strengths and an absence of one or more colours indicated the relative weaknesses. The columns that were between the greatest and least number of squares were interpreted accordingly.

The Checklist of Student Management and Behaviour (Appendix A, page143) was constructed by the teacher/researcher in response to the colleague teachers' observations of their students' lack of organizational skills prior to the commencement of the study. The assessment criteria were grouped under the headings of Organization, Focusing and Self.

Checklist of Student Management and Behaviour
The **Organization** components were ▪ Arriving on time ▪ Bringing lesson resources to class ▪ Settling promptly on arrival
The **Focusing** components were ▪ Beginning tasks promptly ▪ Staying focused during the task ▪ Showing initiative ▪ Completing tasks

The **Self** components were

- Articulating learning needs as students' understanding of their own strengths and limitations grew
- Discussing preferences in relation to learning
- Making statements about themselves as learners
- Writing reflectively in journals
- Setting goals and monitoring their own progress.

It was hoped that the checklist would be useful in the early detection of students who were persistently disorganized, students who were unable to begin and/ or complete tasks confidently or independently and students who were exceptionally passive in the learning situation. The final section was intended to assist the colleague teachers by providing some indicators relating to the project's research questions. It was anticipated that the collection of evidence using these indicators could support the colleague teachers at a later date when they were formulating reports, making recommendations regarding students' progress and learning needs and completing the *Teacher Interview Form* (Appendix A, page 145) at the conclusion of the project.

The backs of each of the *Checklists Of Student Management and Behaviour* (Appendix A, page143) were left blank for the colleague teachers to compile their anecdotal records. It was envisaged that a new checklist sheet would be used each day and the record would only detail those unable to meet the requirements in the **Organization** and **Focusing** sections of the checklist. It was not considered reasonable to expect the section on **Self** to be completed each day and the colleague teachers each decided that they would record the positive data in this section on the occasions that the students demonstrated these skills.

The *Student Interview Form* (see Appendix A, page144) was designed by the teacher/researcher to provide information from the students regarding their learning preferences, self- knowledge, personal learning strategies and their progress with their goal-setting and achievements. The identification of personal strategies was considered to be of special importance, as these may be task specific or more generic in nature. The interview process also sought to identify students' attitudes to learning in English and provide an opportunity for students to express their personal likes and dislikes and to explore the potential of using their relative strengths to assist in overcoming tasks that they found difficult, uninteresting or overwhelming. Each student was interviewed individually, using the same *Student Interview Form*, (Appendix A, page 144) on three separate occasions. The interviews were conducted by the teacher/researcher and the student responses recorded verbatim.

The *Teacher Interview Form* (Appendix A, page 145) was compiled in order to allow the colleague teachers the opportunity to summarize their assessment records, anecdotal records and observations of the students. In addition to their own observations, they each had made note of incidental comments and observations made by other adults who had reason to work in the learning environment with some of the students. These comments were mostly restricted to those students who had been funded for specific learning difficulties and were completing one- to one programs designed by various specialists to support their learning. The questions on the *Teacher Interview Form* (Appendix A, page 145) related to the research questions. This evidence then contributed to the final conclusions that formulated as the result of the study.

The *Smart Goal Contract* (Appendix A, page146) provided the format for the students' goal-setting activity. The goal setting process was established for several reasons. Firstly, it afforded the students an opportunity to be involved in the process of determining their own learning priorities. The procedures involved in establishing a SMART goal also encouraged students to be reflective about their own learning needs in English. By identifying specific goals and establishing ways in which these goals can be achieved, it was hoped that students would become more aware of their individuality as learners and of the strategies that supported their individual learning processes.

The Smart Goal Contract (Appendix A, page 146) provided students with detailed guidelines. It established a step- by -step procedure for setting goals and prompted students to consider the details. Students were required to state why they had chosen their goal and the strategies that they may be able to use to achieve the goal. Despite this detail, the contract remained flexible and was able to be adjusted or reassessed. *The Smart Goal Contract* (Appendix A, page 146) itself provided a concrete focus for the students and remained in the students' possession so it could be accessed at any time.

The process of nominating a goal, determining why the particular goal is of importance, considering which strategies would be most supportive, selecting the attitudes and values that were the most meaningful and personally determining a way the SMART goal-setting strategy was implemented, served as a tool to assess the development of the students' intrapersonal intelligence.

Each student, having decided on a goal that they had never previously accomplished, completed the details on *The Smart Goal Contract* (Appendix A, page 146). The degree of detail that was required by the *Smart Goal Contract* (Appendix A, page 146) was considerable. Although each component of the SMART acronym was aimed at clarifying the goal and encouraging the students to select appropriate actions to enable successful goal achievements, there were concerns that a number of the students in the study may find the process very onerous. After the students had attempted the completion of the initial *Smart Goal Contract* (Appendix A, page 146), colleague teachers were requested to identify any students who they felt were not able to read, understand or complete the *Smart Goal Contract* (Appendix A, page 146) sufficiently well to continue using this contract on a regular basis. It was agreed that a simpler method of recording goals would be established if any of the students were in this situation. These students were to remain in the study and record their goals only in a small coloured flip- book. These books were known as *The Goals Flip Books.* The recording of successful strategies for each student was completed as part of *The Student Interview Form* (Appendix A, page 144).

The Student Learning Log (Appendix A. page 147) was the record that the students kept themselves of their assessments, feelings and reflections of the procedures and activities that comprised their lessons. Time was allocated as regularly as possible for the students to make entries in their learning logs. They were encouraged to write independently and nothing was censored or corrected in the logs. Students were permitted to record responses in forms other than writing, for example ticks or pictures of feelings.

It was hoped that these *Student Learning Logs* (Appendix A, page 147) would provide evidence of any growth in the students' self –knowledge in regards to their learning in English. The rating scale used to determine the quality of the journal entries included the pictures, ticking systems and any other type of entry the students offered as an entry in the early stages of the project. Responses that had not relied exclusively on the stimulus or starter questions have scored more highly than those that relied on the questions. The purpose of this was to establish if the students were merely responding to questions provided or were taking the opportunity to express their own ideas and feelings and articulate their evaluations in terms of their own learning and themselves as learners. The following rating criteria were used.

Rating Criteria for Student Learning Logs
Rating 0. Entries that contained one or two word answers to the starter/support questions. For example, *yes, no, sometimes, don't know.*
Rating 1. More expansive answers to the starter questions. These were the student responses that did contain information but were still responses made to the starter questions. The other response that rated only one was that which merely described what occurred in class. For example, *Today I learnt about verbs.* In response to the question "Did you learn anything new today?"
Rating 2. Own responses, that is responses not prompted by the starter questions, that included some indication of ' feelings towards lessons, activities, their own performance ect. For example, *I liked writing procedures.*
Rating 3. Own responses, that is responses not prompted by the starter questions, that included definite learning preferences. These were responses that students made that gave some information regarding the types of activities that they preferred to do as learning activities. For example, *I like doing the activities where we have to have a partner and we do things together.*
Rating 4. Entries made that contained some evaluative comment and were not in response to the starter questions. For example, *The spelling games are very good. They help me remember my spellings.*
Rating 5. Any entries not made in response to the starter questions and that contained specific comments regarding self –knowledge. For example, *The work was hard for me today. I am not good at those sort of questions.*

The results were graphed for each student providing a profile that illustrated the depth of reflection each student had recorded in their *Student Learning Log* (Appendix A, page 147).

Criteria for Rating on the Teachers' Interview Sheet

The teachers nominated a rating that they felt reflected the degree of competence each participant exhibited in the English classroom. They agreed on the criteria for each score and each question, then summarized their observation, conferencing and anecdotal records by using these scores.

Hypothesis One

That students will improve their skills in defining new learning goals in English.

This was to be evidenced in the degree of independence that the individual students demonstrated when formulating goals during the duration of the study. The students were required to complete as much of the goal-setting process as possible using *The SMART Goal Contract* (Appendix A, page 146). The colleague teachers intervened when students needed prompting to start considering a new goal, the suggested goals lacked specific focus, or other sections of *The SMART Goal Contract* (Appendix A, page 146) proved to be a problem with which the students required assistance. The colleague teachers kept records of the goal – setting process and the ratings were agreed upon using these records.

Rating 1. Needs teacher to help define ideas and write as a goal. This rating was recorded for students who could not independently formulate their goals. These students needed prompting to set a new goal and also needed help completing each section on *The SMART Goal Contract* (Appendix A, page 142).
Rating 2. Beginning to define ideas and set goals independently. Students who did not require prompting to set a new goal or assistance in deciding the general area in which they wanted to achieve, but could not complete the goal-setting process on *The SMART Goal Contract* (Appendix A, page 142) independently. These students had difficulties making their goals specific and needed assistance in not more than two other sections of *The SMART Goal Contract* (Appendix A, page 142).
Rating 3. Has well defined ideas but needs support in formulating these on *The Smart Goal Contract* (Appendix A, page 142). Students who demonstrated independence in determining their own goals, learning strategies and time frames but were not able to make the goals specific enough without teacher assistance were recorded as rating 3 points.
Rating 4. Independently formulates goals and monitors progress. The students who were able to complete *The SMART Goal Contract* (Appendix A. page 142) independently, needed no prompting to set new goals and kept their own informal or formal records of their progress were rated in this category.

Rating 5. Independently sets and monitors progress of goals. Is able to think ahead and formulate future goals. The students in this category not only exhibited all the skills of the students who rated four, they also planned their future goals in advance of the completion of the current goal and anticipated their learning needs.

Hypothesis Two

Identifying own strategies for achieving own learning goals in English

For the second question the colleague teachers gave each of the students a rating according to the degree of competence that each student had demonstrated in planning, articulating and assessing the strategies that they had chosen in order to achieve their goals successfully. They also considered the degree to which the students demonstrated they could exhibit these skills independently and the consistency of these demonstrations. These were the selected criteria for the second question.

Rating 1. Not able to plan strategies independently, not able to determine or discuss which strategies work without reviewing previous goals and identifying strategies in conference with the teacher.
Rating 2. Beginning to articulate own ideas and strategies. These students could identify strategies that had worked in the past but were unable to identify how these could apply to new goals without conferencing with the teacher.
Rating 3. Has own definite ideas, needs support in organization. These students knew about own strategies and how they could be used to achieve their goals, but were not able to consistently plan and assess strategies independently.
Rating 4. Can plan independently, articulate strategies and monitor own progress by assessing the efficiency and effectiveness of the strategies. These students were able to consistently demonstrate these skills.
Rating 5. Articulates clearly, independently plans, monitors strategies, consistently plans ahead. (latter was to be evidenced in who displayed any of the following capacities: planned two goals to work towards simultaneously, planned the strategies and goals for the future, that is, before the completion of the current goal, anticipated which skills would be required to achieve in the future in English.)

Hypothesis Three

Improved skills at staying on task, persevering when the task became difficult and completing work tasks in the English learning environment.

The colleague teachers recorded how independently the students settled to start a task, if they were organized and had the equipment they needed, if they completed work tasks to a satisfactory standard considering their level of skills in English and the

degree to which students had improved in these skills since the beginning of the project. These ratings reflect the performance levels of the students at the end of the study.

Rating 1. Students who consistently need outside intervention from the teacher to start work promptly, stay on task and complete work and demonstrated very little progress in these areas. These students still had some difficulty completing work tasks designed to meet their learning needs in English, even with teacher support.
Rating 2. Students who are beginning to take responsibility for starting promptly, remaining on task and completing work, but still needed support from the teacher to sustain the effort. These students had made observable progress and had a greater number of work tasks completed.
Rating 3. Students who need a little support occasionally in the development of these work skills. These students had made considerable progress and this was evidenced by the colleague teachers' records, anecdotal notes and the students' own work samples, many more of which were completed satisfactorily.
Rating 4. Students who are achieving these work skills independently. These students exhibited a significantly higher degree of on-task behaviours, including being organized to start tasks and completing more tasks than previously. They were able to sustain their skills consistently without teacher intervention.
Rating 5. Students who demonstrate the above work skills consistently and complete all tasks in English. These students also consistently organized themselves by thinking ahead and showing initiative in their work skills. They were regarded as making very good progress.

Hypothesis Four

Demonstration of an increased awareness of own relative strengths and limitations as defined by Gardner's intrapersonal intelligence

These observations were confined to those made in the context of the English classroom. The colleague teachers noted how effectively the students used their nominated strategies to assist them in the classroom and become more independent in their learning. They also noted how the students negotiated the conditions in the learning environment as a result of their increased self-awareness as learners and self-knowledge.

Some of these negotiations took the form of seating arrangements, working with different students in team situations and the general interaction and reactions that the students exhibited regarding their understanding of their own learning and that of their peers. Other students negotiated the learning environment in order to more easily

facilitate the learning strategies that they had identified as being successful or to investigate new strategies that had worked for others.

The colleague teachers summarized their records using the following criteria.

Rating 1. The students who consistently need outside intervention to assist them in settling to work on given tasks and who had to be consistently reminded of the strategies that they had nominated as facilitating learning for them.
Rating 2. Students who are beginning to take responsibility for starting promptly, negotiating more successful working conditions on occasion and showing more responsibility for facilitating their own learning by using their strategies in the English classroom. These students were not able to demonstrate these skills consistently and intermittent intervention from teachers was necessary.
Rating 3. Students who need support occasionally. These students were able to regularly negotiate the learning environment in order to develop their strategies and consistently attempted to use their nominated strategies where appropriate. These students made good progress in identifying the conditions that impacted negatively on their learning.
Rating 4. Students who consistently use the successful strategies they had identified to facilitate their own learning and negotiated the learning environment to enhance their potential to become more successful learners. These students were able to do this independently.
Rating 5. who demonstrate the skills described in Rating 4 but in addition, organize themselves by thinking and planning ahead and showing initiative in their negotiations for future learning in the English classroom.

Implementation

The initial step was to identify students' strengths and limitations, as perceived by the students. In order to accomplish this, a *Multiple Intelligences Profile* (see Appendix A, page 141) was compiled for each student participant.

In order to accomplish this task, measures were put in place to ensure that this activity was non-threatening, manageable, non-competitive and accurate. The students were taken out of the classroom and gathered together in a comfortable area. A discussion of differences was initiated, during which the students were asked to identify different situations in which the individuals would behave in a variety of ways. The students were encouraged to acknowledge that no one was good at everything.

The Checklist of Student Self-Management and Behaviour (Appendix A, page 143) was implemented. The teachers involved in the study were requested to regularly note

which students were late, poorly prepared, unable to get organised to start a task promptly etc. The teachers were instructed to commend the students on their improvement in these areas but to make no negative comment.

The Student Learning Logs (Appendix A, page 147) were planned. Starter questions were prepared, in order to establish the purpose of the learning logs and in this way students were initially prompted regarding the types of observations that they may choose to record in the learning logs. As the task became more familiar, students were encouraged to become more independent and record their thoughts and reflections about the lessons independently. Although studies involving students as young as these journaling their own reflections could not be found, there was evidence that journaling had been found to be effective means of students recording their own progress and being reflective about their own feelings and decisions.

Student introduction to the goal setting strategies was as follows. The format used to help students organize academic English goals was the *Smart Goals Contract* (Appendix A, page 146). The students were introduced to the *Smart Goals Contract* (Appendix A, page 146) as a group.

The colleague teachers were concerned that any student who found *The Smart Goal Contract* (Appendix A, page 146) too difficult would have to be excluded from the project as yet another failure in the English learning environment. Consequently, the research design was modified to include these students. It was planned that any students who were identified after the initial goal- setting activity, as having extreme difficulty, would be asked to continue by setting goals in *The Goals Flip Book.*

Gradually, as they became more confident and proficient in the process, the colleague teachers agreed to encourage these students to attempt *The Smart Goals Contract* (Appendix A, page 146) again. The remaining students would continue to set their goals throughout the project using *The Smart Goals Contract* (Appendix A, page 146).

Completion of one goal was to be followed by the setting of another. Achievable goals were brainstormed with each group of students if they so desired and a list compiled of these ideas. This was then to be displayed in the classrooms as a reference for those students who were uncertain of what they would like to set as their next goal. There was no compulsion to set one of the resultant goals or to be competitive in any way. Realizing that a concrete record of the goals scored would be important to the students, a goalpost display was organized by the colleague teachers (Appendix B, page 151). Each goal achieved was recorded as a ball of the student's choosing, which was placed above the 'bar'.

It was planned that the students be permitted to nominate the type of ball they each would like displayed between the goalposts as a record of their achievements. Students were also to be actively encouraged to review the progress of their goals and to adapt them or to change them where necessary. Goals that were longer-term might be broken down into smaller steps, with the progress recorded on a footstep, which could then form part of the 'running record' on the *Steps to Success Display Board (*see Appendix B, page 152). This was seen as an important strategy for any students who are extremely committed to their goals, even if they realize that these particular goals could not be realistically achieved in the short term.

The Student Interview Form (Appendix A, page 144) were scheduled at intervals throughout the ten-month study; the first conducted approximately three months after the study commenced, the second after six months and the final interview at the conclusion of the study. The students were not requested to attempt an interview at the commencement of the study. Teacher/researcher observations led to the belief that this would not be a comfortable experience for many students. This decision was reached in consultation with the colleague teachers. Considerations included the students' current perceptions of themselves as learners, the degree of self-knowledge reflected in the students' *Multiple Intelligences Profiles* (Appendix A, page 141) and the degree of difficulty experienced setting the original SMART goals.

The Intervention Program (see Appendix B, page 150) consisted of strategies and procedures designed using the Revised Bloom's / Gardner's Matrix to encourage students to make more initiative in the learning process, activities that encouraged peer interaction, decision-making and independence. The program included a wide variety of activities that focused on personal preferences in that it provided students with choices regarding how they learnt and which products they produced as evidence of their learning.

It was designed to engage the students in activities that were important in the acquisition of basic skills in English, but which these students felt were uninteresting. The students nominated learning spelling, writing stories and answering comprehension questions as activities in this category. The program aimed to use the

strengths identified by the students in their *Multiple Intelligences Profile* (Appendix A, page 141) to engage them in some of these tasks.

It included many opportunities to showcase the talents or skills of each participant and provided structured discussion times for students to articulate preferences. Many games and fast moving activities were included as it was felt that these held greater appeal for these students, twenty three of whom had indicated on the *Multiple Intelligences Profile* (Appendix A, p.141) that bodily kinaesthetic intelligence was a relative strength. Other activities concentrated on giving the students experiences during which they had to make decisions about their learning preferences. Many formerly teacher-directed activities were redesigned to allow for student interaction and tasks were heavily laden with choices.

All the activities were designed to assist the students in their choice of suitable goals, to help them identify which strategies worked best for each of them and to provide learning experiences which were interesting and engaging. In this way the program changed the type of interaction with the curriculum that was the usual experience for these students. It supported their efforts to develop accurate self-knowledge and be partners in their own learning. It was also designed to allow the students opportunities to become more reflective about their learning and promote critical self- evaluation.

It was not expected that each student complete each of the activities. Some activities were common to the complete group, others were introduced to students as the need or interest arose. Some of the students spent longer than others on the chosen activities. Throughout the ten -month project the intervention strategies were

constantly reviewed, modified and expanded, depending on the degree to which each proved to be successful and the emergent needs of the students.

Some of the resources, such as the spelling lists and games to help develop a variety of skills in English, were designed to be developed by the students themselves. So also were the questions to facilitate the development of comprehension skills that were based on Revised Bloom's Taxonomy. It was hoped that the resources would then reflect the interests of the students, be couched in language that was familiar and user-friendly and be utilized as fully as possible. As the resources needed to be developed with due consideration to the relative strengths and weaknesses of the students in question, this strategy not only served that purpose, but gave the students an opportunity to be active in designing some activities that would constitute part of their own learning program.

Conclusion

The study was designed as action research in order to establish if being involved in an intervention program would benefit students. The program was based on their perceived areas of relative strengths and designed to meet their learning needs. A variety of research tools were implemented in order to collect data from several perspectives and facilitate the triangulation of data and strengthen the validity of the research. The English classroom environment was selected as an opportunity to involve the students in the development of skills, strategies and degrees of self-awareness that had previously not been evidenced in their learning behaviours. *The Intervention Program* (Appendix B, page 150) was implemented by two teachers and the teacher/ researcher over a period of ten months.

Chapter Five

Setting Goals and Articulating Strategies for Success

This chapter focuses on the Hypothesis One: *that students will improve their skills in defining new goals in English,* and Hypothesis Two: *that students will demonstrate better skills in articulating how they can achieve their own goals in English*. These two hypotheses are discussed in relation to each other, as they are interdependent. The goal–setting process was seen to be the initial part of a two-step process. The second part of the process of students achieving meaningful learning by student-initiated activities was how these goals could be achieved. Therefore an integrated discussion of both these hypotheses seemed appropriate.

All the students were excited about the goal-setting and eager to participate in the project, including those who had difficulties completing the contract. The colleague teachers' and teacher/researcher's concerns regarding the competency of some students were well founded. Although the MI profiles were compiled with relative ease, *The SMART Goal Contract* (Appendix A, page 146) proved to be problematic.

The student profiles indicated that nine students did not perceive themselves to have any strength at all in the area of linguistic/verbal intelligence. The profiles also provided a record of what the students felt was their strongest intelligence. Eighteen of the twenty-seven students nominated areas of greatest strength that were not directly related to traditional classroom activities or academic areas, that is, the areas of language and logic.

Intrapersonal intelligence was not considered a traditional area of strength. None of the students nominated intrapersonal intelligence as a significant strength, although only six of the students recorded no intrapersonal strength at all on their profile. These records provided the evidence that the students did not regard themselves as particularly competent or successful learners in the English area and that none felt they had a relative strength in the target intelligence, intrapersonal intelligence. It is likely that these perceptions of themselves as learners and as young students unsure of their own relative strengths and limitations seriously undermined the students' confidence, especially when attempting the unfamiliar task of SMART goal setting. The students found the task difficult.

None of the students was able to complete the SMART contract without assistance. Three students were confident to complete one section at a time after receiving reassurance and further explanation of the requirements. The remainder was not able to attempt the task without one-to- one support from an adult. Ten students were identified as having extreme difficulty and required one-to-one assistance in order to complete *The Smart Goal Contract* (Appendix A, page 146).

There were several areas of difficulty for this group of students. They found *The Smart Goal Contract (*Appendix A, page 146) difficult to read. When *The Smart Goals Contract* (Appendix A, page 146) was read aloud to these students, they still found it difficult to determine what exactly the task required. When the task was explained and some understanding reached on an individual basis, making a decision about the goal itself became the problem. Nine of these ten students found decision-

making about a learning goal in a classroom situation very challenging. Only one of the students was happy to decide on a goal for himself.

It was observed that these other nine students would have been more comfortable if the teacher had taken responsibility for determining the goals on their behalf. After further interaction on a one –to- one basis, two more of these students were able to set a goal. The remaining seven established their goals after further, substantial discussion. These discussions took place as individual teacher/ student meetings over a period of days.

Developing specific goals also proved to be a challenge, even for the remaining seventeen who were confident to read and set goals for themselves. Having been directed to set a goal that they would like to achieve in English, there were many instant responses, but these were non-specific in nature. Examples included,

I want to be better at English.
I want to read better.
I want to be a better reader.
I want to do better in English.
I want the work to be not so hard.

Consequently, the meaning of specificity needed to be explored and then applied to each of the ideas that the students had offered regarding their own goals.

The role of decision-making in the formal education environment was unfamiliar to the majority of students and the resultant insecurity was further complicated by the need for personal, individual responses. There were no clear right or wrong answers.

The students also had difficulty defining and choosing a reasonable timeframe for their goal. They were either unrealistically short or were too long term. Their suggestions often focused on days rather than weeks, or months rather than weeks.

It was decided after the initial goal-setting experience that students needed time to discuss their goals with their peers and support each other with suggestions, both for the development of specific goals and for strategies, to ensure the best possible chance of achieving the goals.

The decision was also made to modify the goal-setting process for the ten students who found the task overwhelming. In place of *The Smart Goal Contract* (Appendix A, page 146) these students recorded their goals only in a small flick book made in the colour of their choice. As these students found writing the strategies and timeline etc., related to their goals a long, arduous task nothing else was recorded in these books. The colleague teachers kept records of progress and the teacher/researcher recorded successful and unsuccessful strategies during *The Student Interview* (Appendix A, page144) process.

It was hoped that this study could provide all students with the opportunities to develop their intrapersonal intelligence, so it was considered that this modification was necessary in order to allow these students to continue. The students themselves were interested and able to articulate what they would like to achieve and how they could achieve it, but were disadvantaged by their limitations when attempting to record their ideas.

The discussions that evolved regularly regarding the types of specific goals that were popular, or appropriate as English goals, provided opportunities for students to articulate their ideas and share with their peers. These sessions also provided the material from which the teachers compiled classroom lists of goals for display. An entry in the teacher/researcher observation records just prior to the first interview, notes that two male students left a discussion commenting,

I have been thinking all morning.

So have I, good isn't it? agreed the other boy.

These comments indicate a growing awareness within these students concerning their own thinking which could impact on their goal setting process.

Colleague teachers initiated sessions during which students were guided in the process of setting appropriate goals and assessing their timelines. They also assessed student progress in attaining their goals. The interview responses provide evidence that Student No 26 had already modified her goal independently, prior to the group/individual reassessment times organized by the teacher. She had set a particularly difficult goal of getting her spelling correct for three consecutive weeks, and was quite realistic about the feelings of frustration and annoyance she would feel if she didn't make it more realistic and achieve it in the near future.

Three months into the project, at the time of the first interviews in May, five of the students reported that they had yet to achieve a goal. Student No 20 was determined not to give up on a particularly difficult goal as she had only one more week to go before she achieved it. Another student, student No 13, remarked that she was *Still going after the first one. Getting my spelling all right for five weeks in a row*. The

challenge of the nominated number of weeks with spelling all correct proved to be a formidable one, however, these students and Student No 14 were determined to achieve the goals they had decided upon without modification.

The responses of the two remaining students were also indicative of their current involvement in the goal – setting process and their commitment to it. Student No 1 responded to the question '*Have you achieved any goals?*' with a simple *No*, the other, Student No 10, responded *Not that I know of*. Teacher anecdotal records indicate that Student No 1 had extreme difficulty understanding set tasks, starting tasks, remaining on task unaided and completing tasks. This had an impact on his confidence as a learner in the classroom. Setting a specific learning goal in English was a very difficult task and, having received assistance to set a goal, then achieving the goal proved to be a considerable challenge.

Student No 10, whilst not experiencing specific learning difficulties, found classroom interaction distracting. He rarely completed tasks, displaying little interest in the content of the classroom activities or in the collaborative effort of the group. Teacher anecdotal records of this student indicated that he found little difficulty setting a goal, but had difficulty becoming committed to achieving this goal and showing any interest in the process.

Interestingly, the interview question pertaining to the *Student Learning Logs* (Appendix A, page 147) required students to indicate how they felt about the task of writing in their learning logs. This student's response to this question at the first interview was *No, not really, I want to have my lunch.*" As the *Student Learning Log*

(Appendix A, page 147) was completed prior to lunchtime this response may have indicated that he found the time component difficult to organize, or it may have indicated his observed lack of interest in English.

A record of the goals set by each student reflected the trend for the majority of the goals to be very concrete. Many students wanted to have evidence of success in a very measured fashion. Success at spelling tests, reading chapter books, being awarded red and blue pen licenses as the result of improved handwriting style were all very popular. These may have been chosen because the past experience of the students may have been that this was how learning was measured, or it may simply have been that at this stage in their learning, recognizable, standardized measures of learning achievement were most appealing to these students. The recording of student goal achievement was the goalpost and bar display.

Goals in progress could be placed increasingly closer to the bar as students came close to achieving them. As team sport was very popular amongst the students, this symbolic display was very easily understood and each of the students became adept at discussing their personal learning goal history and which goals they would like to attempt to achieve next. Interestingly, by the conclusion of the study two thirds of the students had two goals in progress simultaneously.

This situation developed because many of the students had set another, longer, short-term goal, for example, the goal of qualifying for a pen license. As this was not as readily achieved as some of the other goals, these students decided not to abandon that specific goal, but to continue to work towards it, setting another shorter term goal in

addition to the original goal. The progress of the longer-term goals could be recorded, if the students desired, on the *'Steps to Success'* chart. (Appendix B, page 152) This arrangement proved to be satisfactory, as students could observe their progress even if the goal was not achieved for a considerable time, e.g. a term or longer.

Students' Progress in Defining New Goals in English

The Student Interview questions included " Have you achieved any goals?" The students all confirmed, at some time during the series of three interviews, that they were achieving their goals. Although nine of the original ten students who had difficulty completing *The Smart Goal Contract* did not master this until immediately prior to the last interview, (Oct/Nov.), they were still able to set appropriate goals and achieve them. The teachers' anecdotal records confirm that these students were becoming more skilful at setting specific goals. The students' evidence that they were achieving their goals also indicates that the learning goals being set met their needs.

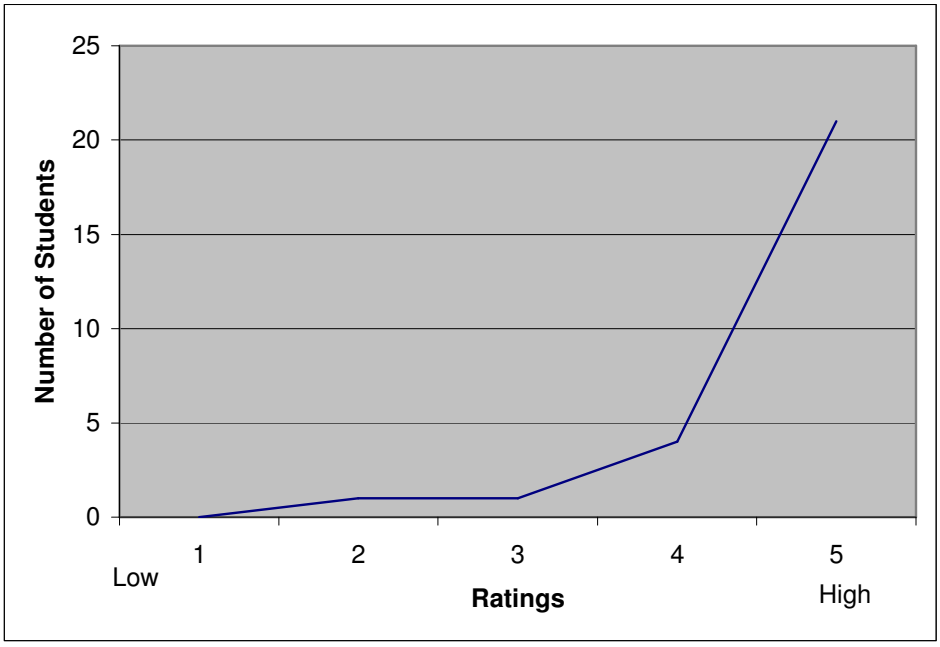
The conclusions that the colleague teachers reached as a result of their records and observations supported the evidence on *The Smart Goal Contract* sheets and that provided by *The Student Interview* information. The teachers responded to the first question in The Teacher Interview, providing information regarding the progress of each participant individually. This question related directly to the first research question. The research hypothesis was '*That students will improve their skills in defining learning goals in English'*. The colleague teachers answered the question 'Has …improved in defining new goals in English?' Their responses indicated that twenty- one of the twenty -seven students had achieved sufficient competence to be rated five on their scale. They were able to formulate and monitor the progress of their

own goals. Furthermore, they were able to anticipate the direction that they each wished their learning to take and plan ahead accordingly.

Four students had acquired the skills to independently set and monitor their goals. One student had clear ideas regarding what he would like to achieve and was able to articulate his ideas, but not formulate them independently on *The Smart Goal Contract* (Appendix A, page 146). The remaining participant, Student No 1, had made progress also. Although unable to complete the process independently, he was able to think of where he would like his learning improve and was beginning to suggest ideas for his goals. Once established, he was becoming increasingly independent with the monitoring process.

Each participant had made progress in defining new learning goals in English. Graph 1 illustrates the ratings that were given to the students by the colleague teachers as part of their summative evaluation. It indicates the number of students that achieved each of the criteria of competence in goal setting at the conclusion of the study.

Graph 1 Teachers' Observations of Student Skills in Setting Goals in English at the conclusion of the Study



Graph 1 shows the ratings awarded to the students for goal setting at the conclusion of the study by the colleague teachers.

How Students Articulated Ways to Achieve Their Goals

As with the actual goal- setting process, considerable discussion was required to enable students to determine what actions or strategies would be helpful in achieving the goals. The students tended not to focus on strategies that they might enjoy, or be successful for them as individuals, but were inclined to offer strategies they associated with 'schoolwork'. This was not entirely unexpected, considering the characteristics of the participant group.

It was considered to be an essential dimension in understanding one's self as a learner that the students developed learning strategies that suited their learning styles and preferences. The evaluation of the students' responses regarding their successful strategies was evaluated in several areas. It was primarily focused on the students

being able to articulate their strategies increasingly clearly. However, the evaluative process also included some consideration of the scope and practical application of the nominated strategies. Identifiable trends in the responses were also sought, as was an increasing awareness on the part of the students of their role in sustaining the motivation to utilize these strategies effectively.

Each of the interviews gave the students an opportunity to reflect on their progress and how they actually achieved their goals. The responses ranged from single word answers to more detailed explanations. Many students hesitated over their responses in the first interview, but this discomfort was not apparent in the subsequent interviews. The students had obviously become more accustomed to articulating their ideas during the interview process.

The interview question 'How did you do it?' referred to achieving goals. The responses of the students in the first interviews were mostly rather basic and referred specifically to the goals that the students had attempted. Six of the responses were articulated in three words or less. Five of these responses included 'Don't know' and 'I can't remember'. These responses are not easily interpreted, considering that three students involved had achieved their goals. It may be that these students found difficulty articulating how they achieved their goals, or simply that the goal or goals in question had been achieved some time before and the students were having difficulty remembering what they actually did to achieve the previous goals without *The Smart Goal Contract* (Appendix A, page146) in front of them.

Evidence that the students had used strategies other than those traditionally used to achieve in English, especially to learn spelling more effectively, was found in the following responses from the first *Student Interview Form* (appendix A, page 144).

Student No 4 *Pass the ball to Dad and say the words.*
Student No15 *Using spelling sports- shooting the ball into the hoops.*
Student No 16.*Netball shooting.*
Student No18 *Practice with the ball.*
Student No 24 *Ran around the block with my dog and practiced my spelling.*
Student No *27 Skipping the words and bouncing the ball.*

These responses all used bodily kinesthetic strategies. This indicated these students had selected strategies that reflected their learning preferences and their perceived relative strengths as recorded in their individual *MI Profiles* (Appendix A, page 141). The inclusion of this type of alternate strategy to become successful in the spelling task was part of the differentiation planned in *The Intervention Program* (Appendix B, page150).

These activities proved to be useful learning strategies for a number of students whose goals necessitated some degree of memorization, as it may have encouraged them to persevere and provided a physical component to this process. However, despite their popularity, activities such as these would have limited usefulness in the process of achieving a variety of learning goals in English. Other strategies, which were more organizational in nature, would be more widely applicable to English learning goals, especially if the goal did not involve simple memorization. Consequently, further evidence was sought that reflected the use of more inclusive or generic strategies.

Some of the students recorded strategies that indicated that their awareness of self-management was developing. Eight students in the first interview not only indicated

an understanding of the incremental approach to achieving goals, but also reflected an awareness of the need to organize time and resources appropriately in order to be successful.

Student No 3 *I do spelling then do dictionary meanings.*
Student No 6 *I read myself a bedtime story.*
Student No 9 *Read a couple of pages a day.*
Student No 14 *I ignored my friends and go and do homework for half an hour.*
Student no 16 *I read to my Mum at night. She reads one or two pages and I read heaps more.*
Student No 17 *I practice at home with Mum's paper. Just did it in the afternoon while I was doing cartoons.*
Student No 20 *Practice heaps at home. On Monday and Wednesday we don't do anything after school.*
Student No 25 *Everyday I went home and went to my homework.*

The most popular strategies articulated by students at the first interview were doing some activities to facilitate learning. Practice, routinely setting aside time, completing the homework and reading were also frequently selected. There is evidence of one student whose response was "*Just do it*", so determination and motivation were already evidenced as being important for that participant. Three other students showed that they had enlisted help from their parents to ensure success. The level of commitment to the goal – setting process was established, through these initial interview responses, as reasonably high. Twenty- two of the twenty -seven students responded that they were enjoying developing individual strategies.

Developing More Widely Applicable Strategies

The responses to the second round of interviews in August/ September provided evidence that the students were developing a wider repertoire of strategies as their experience grew. The trends were more 'generic' in nature. That is, they were more general and more widely applicable to a range of English learning goals. None of the students offered *I can't remember*, or *I don't know* as responses. There were two

responses of three words or less, but interestingly, they both targeted the same strategy: *Practice a lot.* and *Practice*, *any sort*. All twenty- seven of the students had achieved success in more that one of their goals.

The students' familiarity with the interview questions and the confidence gained from achieving their goals contributed to the ease with which they answered the interview questions the second time. Not only was the way in which the students articulated their goals scoring strategies more comprehensible and comprehensive, the strategies themselves were more effectively defined. There was more indication that students realized that they were in charge of their goals. This was evidenced in the responses that contained references to how the students felt about their progress and the strategies they had used. It also was evidenced in the positive use of the first person.

The strategies nominated also indicated the growing awareness of the need to develop strategies that were useful for a variety of English tasks.

Examples of these responses in the second interview included;

Student 1. *Organized myself. Just decide to do it and get it out of the way. Work hard, a bit determined. Get a spelling list. Do homework, get up early, write words five times.*
Student 2. *I worked hard for them. I couldn't do it all in one day. I did a bit every day.*
Student 3 .*I stuck with it. It was not really hard, just long. I did it just when I had time.*
Student 4. *I just done my best work. I tried my hardest. I sat near someone who doesn't talk. I just tried not to get distracted.*
Student 5.*Mrs J helps me – helps me to read. Be determined. I don't give up.*
Student 6. *By my brain- I can't control my brain- it controls itself- everyone knows their brain controls them. If you didn't have a brain you'd be automatic. Everyone knows everyone is different.*
Student 7.*Practice. Practice for both, even if you don't feel like it.*
Student 8. *Working hard. I practiced a bit at a time. Not giving up.*

Five other students just replied *Practice*. The skills of working hard, practising, concentrating, being organized, persisting and taking small steps at a time, are life skills and can be usefully applied to a variety of tasks, irrespective of the content, context or circumstances. These students who realized that these strategies allowed them to achieve their goals had, even at the second interview time, already articulated strategies that were multifunctional and not solely useful in tasks that required memorization of material.

Replies of this nature indicate 'ownership' of the strategies and goals to a greater degree than some of the others. There was a definite emphasis on the way the students articulated their feelings and the attitudes that were most helpful in achieving goals Many of these students articulated the process by which they had achieved their goals very clearly, including Student 1, whose strategy read as a procedure. He could obviously use this organizational strategy to achieve a wide variety of his goals.

Student 1 had answered *Don't know* to three of the questions in The Student Interview during the first interview, had achieved no goals and had no strategies that he could remember. He had always found it difficult to stay on task and lacked confidence as a learner in the classroom. Teacher anecdotal records indicate a gradual, but definite, improvement in this student's confidence. Shortly before the interview he is recorded as instructing his work group, *Don't finish that before I come back. I want to write something on that.*

This show of initiative and involvement is especially noteworthy as he frequently lacked the confidence or organizational skills to contribute meaningfully in a group

activity. The questionnaire responses indicate a substantial improvement in self-awareness from this particular student, especially as he concluded with, *it just depends – sport's starting back up. Cricket starts soon.* He was already considering his future commitments in his plans to be organized. In general the trend appeared to reflect a strong focus on the need to persevere, to be determined, stick with the goal and not give up.

Student 11 was much less able to articulate her strategies in the first of *The Student Interviews* (Appendix A, page 144). Although she had achieved a goal, her response to How did you do it? was *I can't remember.* Her second interview response clearly indicated that she was more focused and certainly more clearly articulating the strategies she had used. Student 7 also replied *I can't remember* to the same question in the first interview. By the second interview he was able to clearly state how he had achieved his goals, despite the indication that he did not always feel like doing it.

Student 10 and Student 12 also showed similar progress in articulating how goals could be achieved. Student 10 didn't know if he had achieved a goal at the time of the first interview, and had no strategies he thought might work for him. Student 12 had achieved a goal but was unable to remember her strategies. By the second interview both were able to give clear answers to the same question. There is a significant shift in student 10's commitment to achieving his goal, to organizing his time and to his self- management. Although his strategy of getting everything done and out of the way was contrary to the general trend, his perseverance was an accurate reflection of the most commonly expressed strategy. At the time it was felt, by teacher/researcher and colleague teachers alike, that his progress was satisfactory.

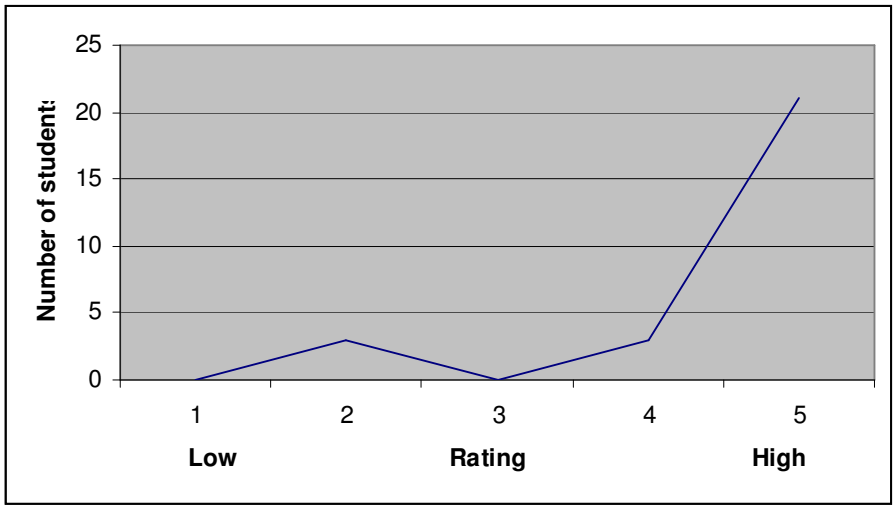
Practice was recorded once again as regular strategy. Doing a bit at a time was evidenced in these responses for the first time. This is significant, as breaking up a large task into smaller components is a strategy that can be applied in many situations, not just a variety of English learning goals. The students' responses also reflected a strong focus on the need to persevere, to be determined, stick with the goal and not give up.

Further Evidence of Students' Increasing Skills Articulating Their Strategies.

The colleague teachers' evaluations showed that three students still required support organizing their strategies and applying them to new goals, but had definite ideas regarding which strategies worked for them. Three other students were planning independently and articulating strategies. They were also monitoring their own progress. The remainder of the students was even more skilled at articulating strategies. They were able to plan strategies to work towards two goals simultaneously and select the means by which to accomplish each of them. Frequently this involved selecting different strategies in order to accomplish each goal. There were no students unable to discuss which strategies worked for them.

Graph 2 illustrates the scores that resulted from the colleague teachers' summative assessment of the students' skills in articulating their strategies. The table indicates that, by the conclusion of the project, all the students' skills in articulating their learning strategies had improved.

Graph 2 Teachers' Observations of Student Skills in Articulating Strategies to Achieve their Goals at the conclusion of the Study



Graph 2 illustrates the ratings the colleague teachers awarded the students for articulation of own strategies at the conclusion of the study.

The third interview was conducted at the end of October/ beginning of November, so the interval between the second and third questionnaires was not as lengthy as the time between the first interview and the second. The responses on average were more succinct than in the second interview, but the strategies were very clearly articulated.

By recording the frequency of key words and phrases in the students' responses, it was possible to identify some common trends. *Don't give up, Be determined, Keep on trying*, indicated that the most widespread strategy was linked with one of the popular strategies from the second interview. This was evidenced in comments such as *'Just decide, just do it, think about it, be determined, keep it in my head, think about it all the time, keep it in my mind and thinked a lot about it.'* The other strategies relating to *organizing set times* and *practicing* remained important in the third interview responses, as did the strategies of reading and working hard at things.

Eleven of these responses elaborated on the information that was offered in the previous interview, and the strategies recorded were very positive in nature. The responses of these students illustrate the clarity of thought and articulation in some of the longer answers, which also provide organizational detail and some insight into the attitudes of the students.

These eleven students have actually begun to discuss strategies that involve thinking about the goals and how to achieve them. The first and last comments imply more reflection than the others, but there is a definite commitment in each of the statements. This 'ownership' of the process appears to be a stronger statement than those that express determination to achieve an isolated goal. These students' skills in articulating how they manage their goals are becoming more personal and linked to their thinking.

The following are examples of the students' responses.

Student 1. *Do my homework for a week. Learn my words. Get up early.*
Student 2. *I just keep working hard.*
Student 9. I read my books each night. I forget how many weeks. Just one thing a night. Monday- dictionary, Tuesday- stories, Wednesday-words, learn spellings, Thursday's spelling test.
Student 14.When I had to read a chapter book, I read to my mum. I had to go to her after my homework on Mondays. Be careful, lightening my pencils so its not heaps dark on the page. Have a pretest so that you can get things right.
Student 26. If the goal was too hard, -say four weeks, I'd change it into two weeks and make it easier. That's about it.

Each of the students had something to offer. Although not all students offered longer or more elaborate explanations, each had clearly articulated strategies. Student No1, for example, offered a much shorter response, but it was clearly a well- established strategy, with which he was very familiar. The responses of the remainder of the

students who were not able to offer anything in the first *Student Interview* (Appendix A, page 144) were also interesting.

Student 5's comment indicated an increasing awareness of ownership of the goal-achieving process. This student has actually given a reason why he has been successful. *Mrs J helps me practise my writing when I go to reading. Don't give up. I got my goal because I do things by myself.* Although he acknowledges that he requires and receives assistance, he recognizes that the key to his achievements is actually himself and his own efforts.

This reply is much more sophisticated than his three- word response in the first interview, and his slightly longer response in the second. He has developed the confidence and self- knowledge to articulate this awareness clearly in response to the question when posed in the third interview. Entries in the colleague teacher's anecdotal records indicate that this interpretation of his response was accurate. He has become totally committed to the class and overcoming his learning difficulties.

Student No 7's final response was also very focused and there was a clear indication that he was committed to the English work that he had set as a goal. Having concluded that he didn't always feel like it in the second *Student Interview* (Appendix A, page144), he appears to have resigned himself to acknowledging that hard work is a useful strategy and is also more reflective, thinking about what he has to do as an ongoing process. Student No 9, although not one of the students who replied *I don't know* in the first interview, has become increasingly detailed about his organizational

strategies. What he organizes as his workload for each night and how he arranges his timetable are all articulated clearly in his response.

Student No11 had also shortened her response. The simplicity of her response also indicated that she had identified a strategy to combat the area of relative weakness that she had found came in the way of her successful learning. Student No 10 had made considerable progress in articulating the strategy he could use to achieve his goals. Although it appears he still favours getting things done all at once, he is able to articulate that he persevered and added the evaluative comment in regards to himself, that it helped *just being good.*

Student No 12 appears to have changed her strategy from *a bit at a time* to a much bolder statement, *Just do it, just decide!* This is very different from the response that she gave in the first *Student Interview,* where she couldn't remember what she did to achieve her goal. Student No 16 also became very definite and very determined throughout the project. Originally one of the students who tried the kinesthetic activities and progressed to practice, she had responded to the challenge of another student achieving goals while she was still struggling. For this student, the motivation was enough to encourage her to increase her performance level and *practice better than I usually do.*

Student No 15 is a very interesting student. He started using the kinesthetic activities to help him achieve his goals in English, and at the conclusion of the study, he is still mentioning these strategies. Although this is entirely consistent with his *MI profile* (Appendix A, page 141), which showed that his major strength was Bodily/

Kinesthetic Intelligence, he was the only student who persevered with this type of activity. The others had all diversified and developed more 'generic' strategies.

Conclusion

The results show clearly that the students had improved both in setting appropriate goals in English and in articulating the strategies they could use to achieve these goals.

Chapter Six

Developing Successful Work Skills

Intervention

This chapter focuses on Hypothesis Three: *that students will demonstrate better skills at: staying on task in English, persevering when the task became difficult, and completing work tasks*. In response to the perceived concerns of the colleague teachers regarding the lack of organization and cooperation in the student groups, it was decided to begin by developing an organizational framework to support the students in their efforts to focus on the task promptly and to complete tasks. This involved establishing groups within which the students could work. Students were assigned roles within the groups and formulated a group identity by developing a Group Mat. Tasks were organized with specific time limits and a timer used to ensure that the activities stayed within the timelines. Students themselves then became responsible for producing many of the resources used to achieve the English learning Outcomes.

The following are some examples of the ways in which the students' achievements were facilitated. Given the necessary criteria the students sourced suitable words for their spelling lists. Using Bloom's Cubes they produced comprehension questions based on the Revised Bloom's Taxonomy to accompany the books they read or had read to them. They then proceeded to edit each other's questions before selecting which to answer from another group's list. The colleague teachers and teacher/researcher introduced new ideas gradually to ensure that the students understood their new roles and responsibilities.

Although it took some students longer than others to become accustomed to the accountability of these new roles and responsibilities, from the outset twenty- two of the twenty- seven participating students regularly began to start their task more promptly, and stay on task for the duration of the activity. As the times were deliberately short to begin with, there was no intention at that time to estimate if the students were improving their skills at staying on task. The urgency created by the short task time motivated the students to collect as many words, create as many questions etc. as possible.

These short activities also ensured that the students were not given sufficient time to waste and were mandated to start work on the task promptly. The students became adept at asking any questions relating to the task and organizing the necessary resources prior to the start of the task time. This structure particularly suited the students who had strong Bodily /Kinesthetic intelligence as evidenced in their *Multiple Intelligence Profiles* (Appendix A, page 141), as the activities changed relatively rapidly for a Stage Two classroom. The sessions were carefully planned so that students were engaged in an energetic activity prior to a passive one in a deliberate effort to adapt the classroom organization to the students' particular learning needs and preferences.

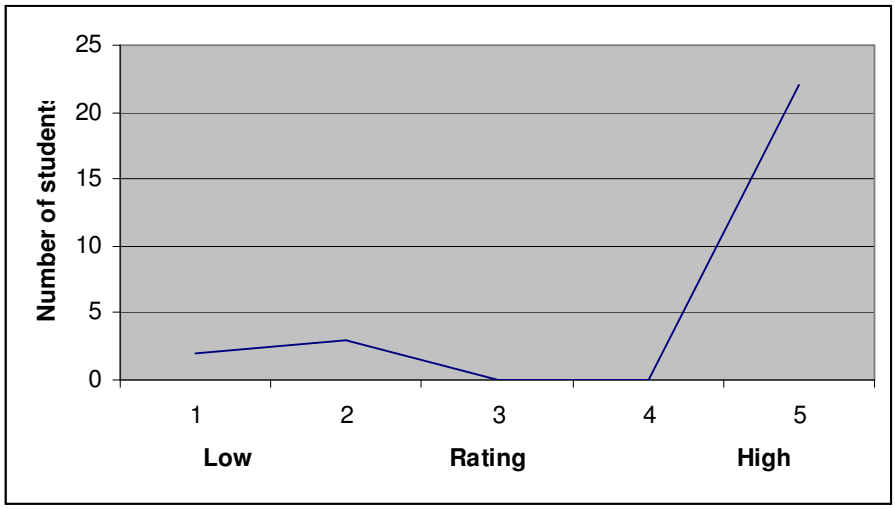
One of the strategies that the teacher/researcher used frequently also provided information about the students. This strategy also supported the students whilst they learned to negotiate the learning environment to suit both individual needs and the needs of the groups. This was a simple procedure. The colleague teachers and the teacher/researchers regularly asked the students, "What can I do to help you become

better learners?" The responses varied in their degree of practicality, but the question was never left unanswered, and provided everyone with an alternative view of the learning situation. Students were encouraged to discuss issues and preferences. Amongst the students' suggestions to the teachers and the teacher/ researcher regarding what would facilitate better learning were ideas on organizing the classroom environment to have specific areas for certain groups, suggestions for suitable equipment to use for spelling sports, suggestions for differentiating the curriculum, requests regarding the format and content of the following day's lesson and offers to provide peer support in a variety of contexts.

Results

Within six weeks, colleague teacher and teacher/researcher records showed that twenty two of the students had demonstrated improved skills in starting promptly, stayed on task for increasingly longer periods, persevered and sought help when the task got difficult and completed more tasks appropriately. They had also demonstrated skills in thinking ahead and preparing for their new tasks. Two of the other students had sustained difficulty; three were inconsistent and needed constant refocusing and reassurance. These results are recorded in Graph 3.

Graph 3 Teachers' Observations of Student Work Skills at the conclusion of the Study



Graph 3 illustrates the ratings the colleague teachers awarded to the students for work skills at the conclusion of the project.

As discussed in Chapter Four, many of these students were observed to be disorganized and had experienced problems successfully completing tasks in English. None of the students had perceived English to be an area of strength when the *Multiple Intelligences Profiles* (Appendix A, page 141) were originally compiled in February. Of the twenty-seven students, only six had squares in the *Linguistic* domain represented English on their *MI Profiles* (Appendix A, page 141) in February. However, the *MI Profiles* (Appendix A, page 141) that were compiled in November, at the conclusion of the study, showed that every student had represented the *Linguistic* domain on their profile, three students had nominated it as an area of strength and every student had increased the number of squares that represented the *Linguistic* domain on their profiles. The students' self -assessment in this area indicated that changes had occurred.

The students appeared to be committed to improving their work skills and by the conclusion of the study most of the students had sustained their efforts and made

significant progress. The records maintained by the colleague teachers provided evidence that was supported by the Student Interview responses and confirmed the increase in the development of the students capacities to organize themselves according to their learning needs and preferences, remain on task of longer and persevere when the tasks were difficult.

Hypothesis Three comprised three components. However, the colleague teachers found that the summary of their formative evaluations resulted in similar scores for all three components. They concluded that, in each case throughout the two groups that comprised the target students, the students who stayed on task in English invariably persevered when the task got difficult and this allowed them to complete more work tasks in English.

Having determined their learning goals in English and developed individual strategies that helped them achieve these goals, it appeared that the students became more confident that they would be able to complete tasks successfully in English and they felt able to persevere, even when the tasks got difficult. The students who elected to nominate two goals that they were trying to achieve concurrently demonstrated evidence of this perseverance. They had evaluated the long- term goal as being too difficult for them to achieve in a short timeframe, and had then taken one step at a time over a longer period of time until the more difficult goal was achieved.

Considering that these students had previously not been very successful in English, it was reasonable to assume that many tasks they attempted would present some areas of

difficulty for them. Evidence that this was the case for the students was found in the *Student Learning Logs* (Appendix A, page 147)

Students had recorded their reflections to the learning activities provided in the English classroom and the goals they were trying to achieve, in a number of ways. Responses included *it was hard today, my goal is hard, neat handwriting is hard for me, B helped me because I got stuck, the work was hard today.* These indicate that the students did experience a degree of difficulty with various tasks. Only three of the *Student Learning Logs* (Appendix A, page 147) did not contain any reference to tasks being difficult on occasion. However, the colleague teachers' records indicate that, despite the difficulties experienced, students were increasingly productive and the task completion rate was immensely improved when compared to the students' individual performance records of previous years.

This evidence is supported by the students' evidence given throughout the series of interviews. As detailed in Chapter Five, the strategies that many were describing as those that facilitated success in English became increasingly focused on the need to be determined, not to give up, keep trying. In turn, the teacher/researcher observations and those of the colleague teachers supported the students' perceptions of what would help them achieve their goals in English.

The MI Profiles (Appendix A, page 141) provided another indicator to explain the students' increased capacity to persevere, even if the task became difficult. Although this project is primarily concerned with an Action research model, some data was able to be interpreted using methodology more commonly associated with traditional,

empirical research methodologies. Consequently, a paired T –test was carried out using the students' scores on both the intrapersonal and interpersonal intelligences sections of *The MI Profile* (Appendix A, page 141).

The students' interpersonal intelligence scores showed a significant increase when the profiles compiled in November were compared to those compiled in February. (See **Table 1**, **Pair 2**). This Paired T-Test showed that p = .000, indicating that these results had high probability of reflecting a true result as there was no indication of possibility of error. (Levin and Fox, 2000). The paired T-Test showed that the students recorded higher scores for interpersonal intelligence in November than they recorded in February and the t score was sufficiently high to indicate that the difference in scores was significant.

The anecdotal records compiled by the teacher/researcher, casual teachers' comments that were recorded by the colleague teachers and comments made by students in the interviews all related to the practical support and encouragement that students in the groups both gave and received from their peers during the completion of English tasks. The comments made by the casual teachers were especially interesting. Both the casual teachers were familiar with some of these students' prior behaviours and lack of engagement in class. During the seventh and eighth month of the project they independently recognized and commented on the improvement on students' self-management strategies and on task behaviours in comparison to those that they had witnessed in the past. The students were being proactive in persevering and encouraging their classmates to persevere in the English classroom.

Table 1. Paired T- Test of Students' Intrapersonal and Interpersonal Intelligences, Feb-Nov.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	FEB - NOV	-2.0385	1.1482	.2252	-2.5022	-1.5747	-9.052	25	.000
Pair 2	INTERF - INTERN	-1.9231	1.1286	.2213	-2.3789	-1.4672	-8.688	25	.000

Table 1 indicates that both intrapersonal and interpersonal intelligences have been recorded as areas of greater relative strength in November than they did in February using the information collected from the *Multiple Intelligences Profiles* (Appendix A, page 137).

Although the *Checklist of Student Self Management and Behaviour* (Appendix A, page 143) initially appeared to be a useful tool, the recording could not be sustained over the period of the study. There were many reasons for this. Firstly, students were occasionally late for quite valid reasons and allowances had to be made for the team of reading helpers who were coordinated by another member of staff and had to work flexibly with a number of English classes. Secondly, the students themselves began to self- monitor when they realized that the teachers were recording their lateness, lack of organization etc. They appeared to be using the teachers' actions in opening the checklist as a visual prompt to manage their behaviour.

The students were aware of the contents and purpose of the document, as it had been the topic of discussion in both classrooms. This discussion occurred as the result of the students noticing the teachers observing and the recording at the commencement of the lessons. When students had enquired, the purpose of the checklist was

explained. The most important consideration was that it took too much of the colleague teachers' time complete all the necessary information.

The individual *Student Interviews* (Appendix A, page 144) offered evidence of the students' increasing sense of awareness regarding their own learning needs, what engaged them in a task, prompted them to persevere and complete the task.
The evidence gathered has been grouped into three sections that reflect the three periods of time up to each of the interviews. The initial period records the students' skills from March until the end of May. The second period was from June until the beginning of September, and the final period from September until the beginning of November.

In the first interviews, twenty- one of the students were able to articulate what strategies and conditions would help them become better learners. Six students stated that they didn't know the answers to those questions. Teacher anecdotal records showed that five of these students still found it difficult to regularly manage their behaviours in the classroom, although some improvement could be observed. The colleague teacher's anecdotal records indicated that there was a tendency for the other student to be increasingly reflective.

The students' responses to the questions in the second interview were generally more expansive. All students, except one, were able to offer an answer. These answers reflected the students' growing familiarity with the negotiation process in the classroom and a general willingness to identify and access learning aides that they thought would facilitate their learning. The trends that emerged from the question,

"What would help you learn better in class?" differed slightly from the trends observed in the first interview answers.

The third interview created some comment from the students. On realizing the questions were very familiar, seven of them reminded the teacher/researcher that she had asked those questions before, one arrived and announced that the process had better be quick as he was busy. Another student asked if some new questions could be put in place. Although the interaction was still positive and co-operative, two students instructed the interviewer to just write what they said last time and another wanted a reassurance that this was definitely the last time the questions would have to be answered.

The question relating to conditions for becoming better learners had also developed, by the third interview, into a very challenging one for some students. Having negotiated the classroom environment in order to better provide for the learning needs of individuals, many students gave more generic answers. Table 2 shows the details of the students' responses. These have been sorted into categories by the teacher/ researcher identifying key words in the students' actual responses and grouping these together.

Table 2 Strategies and Conditions Nominated by 27 Students as Facilitating Better Learning

Response	Number of student responses in Interview One	Number of student responses in Interview Two	Number of student responses in Interview Three
Quiet	2	10	8
Don't know	6	1	0
More academic work	10	3	7
More help in class	1	3	2
Visual support	1	5	3
Computer access	0	0	2
More homework	1	1	1
Nothing	2	2	0
Better listening skills	2	0	0
Quicker working	1	4	2
More games	4	2	2
Be smarter	2	1	2
Work to music	0	1	1
Concentration and effort	0	6	8
More group work	0	2	1
Harder work	0	1	1
Routine	0	1	0
Personal space	0	1	3

Table 2 illustrates the gradual shift in the students' perceptions of the conditions that facilitate effective classroom learning.

In the first *Student Interview* (Appendix A, page 144) *More Academic Work in Class* was the most frequent response, followed by the students who didn't know. The second *Student Interview* (Appendix A, page 144) responses show a different perspective entirely. Ten students had nominated *Quiet* and six had nominated *Effort and Concentration*. This shift in perspective not only reflects an understanding that individuals have some influence over own learning, as opposed to the teacher and what she provides as learning activities, but an awareness of the conditions and strategies that best facilitate their thinking and learning.

The third *Student Interview* (Appendix A, page 144) responses supported this trend. Eight students had nominated *Quiet* and eight *Effort and Concentration*. Although *More Academic Work in Class* had more nominations in third *Student Interview* (Appendix A, page 144) responses than in second *Student Interview* (appendix A, page 144) responses, the *Student Interview Sheet* (Appendix A, page 144) was not designed to record the reasons for each nomination and it was possible that the reason for these nominations was different from the responses in the same category in the first Student Interview responses. Evidence for this was found in the colleague teachers' anecdotal records. These records show an increase in some students' desire to learn and to increase the amount of work they were able to produce.

The inclusion of the need for personal space in the second *Student Interview* (Appendix A, page 144) responses and the third *Student Interview* (Appendix A, page 144) responses strongly indicated that these students were expressing the need for conditions that would facilitate reflection as part of their learning process and that they were able to identify and articulate the conditions that would allow them to focus on their thoughts. These students had expressed a desire for more solitary circumstances than just quiet.

The students' actual responses were grouped into three categories across the series of *Student Interviews* (Appendix A, page 144). The groupings illustrated the gradual increase in the students' awareness of themselves as learners that was reflected by the choice of strategies. The first category of responses included those that only indicated knowledge of personal learning preferences. The second group of responses indicated greater awareness of work skills, frequently in addition to knowledge of personal

learning preferences. The final category contained responses that indicated self-monitoring, reflection, or evaluation.

Awareness of Personal Learning Preferences

Accurate knowledge of personal learning preferences was considered to essential if the classroom environment was to be successfully negotiated to accommodate the learning needs of the students. This self-knowledge underpinned all the other aspects of knowledge that related to students' performance in the classroom.

The responses to questions No 1 and No 2 on the *Student Interview Sheet* (Appendix A, page 144) showed a total of twelve responses that indicated nothing more than an awareness of individual learning preferences. Student No 12 offered two of these in the first and third Student Interview, as did Student No 23. Only one response of this type was recorded in the third Student Interview.

The following are examples of this type of response.

Student No 1. *Games, because I like doing stuff.* (Response from first Student Interview)

Student No 12. *Spelling games, I like doing things.* (Response from second Student Interview)

Student No 11. *Spelling games, because you spell it out on the board and she (teacher) sounds it out.* (Response from third Student Interview)

All the respondents offered more elaborate comments at some time during the interview process. Knowing their own learning preferences enabled the students to negotiate their learning environment in the English classroom. All these students had

done this in order to allow each of them the best possible chance of success. They were all able to identify what sort of conditions did not suit their learning preference and, where appropriate, what resources would assist them to stay on task, support them when the tasks got difficult and help them to complete tasks in the English classroom.

Awareness of Learning Strategies

This group of responses reflected the students' use of the strategies that they had realized would help them to achieve their goals. In addition to acknowledging their learning preferences, these students have indicated an awareness of the role that practice and motivation could play in facilitating success in the classroom. This type of response was offered on three occasions in the first *Student Interview* (Appendix A, page 144) responses, only once in second *Student Interview* (Appendix A, page144) responses and on nine occasions in the third *Student Interview* (Appendix A, page 144) responses. The following are examples of the responses.

Student No 9. *Games, we have to use the spelling words. (practice)*(First Student Interview response)

Student No 4. *Spelling games help me learn for the test.(motivation, practice)*(Third Student Interview response)

Student No 5. *When Mrs S. comes it makes me work harder. (motivation)*(Third Student Interview response)

Student No 7. *Spelling games because we use the spelling words.(practice)*(Third Student Interview response)

The majority of these responses that identified practice as being useful in the learning process focused on games. Even the spelling games that did not take place outside the classroom were interactive and did not rely on students to work in isolation.

Indications of Student Reflection and Evaluation.

The next category of responses is one in which the students have clearly indicated the presence of some type of evaluative process. They have offered responses that include reasons for their choices. In this group, these students must have evaluated the activities in terms of their learning needs, not just because they thought they were fun. These students showed relatively sophisticated knowledge of themselves as learners. They have been able to reflect on the impact of the various activities that constitute practice in the English classroom and have evaluated these, selecting those activities that each feels is most beneficial to him/her as a learner. Their responses provide evidence that these students were able to reflect on their own thinking, not just identify their learning preferences. These are some of the responses.

Student No 3.*Games using pen and paper, teach me more things to do. (evaluation.)* (Response to first Student Interview)

Student No 25 *Learning log because you write down the things you learn and it helps me to see what is easy and hard.(evaluation, reflection)* (Response to first Student Interview)

Student No 8. *Goal-setting, helps by doing a bit towards them. (small, manageable steps, self-monitoring.)*(Response to second Student Interview)

Student No 15. *Spelling and listening games, if you get the word wrong you can learn from getting it wrong. (self-monitoring, evaluation, reflection)* (Response to second Student Interview)

Student No 24. *Story on tapes, listening on headphones, helps with listening. (aware of personal learning difficulties, evaluation)* (Response to second Student Interview)

Student No 24. *Spelling games, helps me learn better by writing them down and memorizing them. (evaluation, self-monitoring)* (Response to third Student Interview)

The responses of Student No 24 are indicative of a participant who continually sought out activities and support materials to help him develop his work skills. Teacher/researcher and colleague teacher observations prior to the onset of the project record that this student had considerable difficulty starting a task independently, lacked focus when attempting to complete a task and had very little persistence. He was extremely dependent on the teacher and constantly sought attention. The records compiled during the project show considerable improvement in the work practices of this student, amongst others.

What Stops Students Learning Well

All the students interpreted the third question in this group (What stops you learning well?) to mean, " What stops you staying on task?" This is evidenced in the actual replies. The answers recorded show a definite trend - the impact of the behaviour of self and others on concentration.

Responses indicating *Noise and Distractions* gradually increased from the first *Student Interview* (Appendix A, page 144) responses to the third *Student Interview* Appendix A, page 144) responses. With the exception of two other responses, the

only other category that was responded to throughout the interview process was *Not on Task/ Not Concentrating*. These two responses are often closely related. The presence of noise and distractions may easily result in lack of concentration and off task behaviours. The latter behaviour frequently results in noise and distractions in the learning environment. These responses are evidence of the students' emerging awareness of themselves as learners and may even indicate that the students were becoming more reflective in the learning process.

The responses that indicated that nothing stopped two students learning were confined to the first *Student Interview* (Appendix A, page 144). That this response did not reappear in the successive interviews indicated that these two students were also becoming more aware, both of themselves as learners and of the potential of external influences to impact on their successful learning. Only one student was not able to name what, if anything, impacted on the potential success of his learning at the end of the project. The responses from each interview are recorded in Table 3.

Table 3 Conditions Which Stop Students Learning Well

Responses	**Number of student responses Interview One**	**Number of student responses Interview Two**	**Number of student responses Interview Three**
Noise and distraction	16	19	23
Bad start today	1	0	0
Illness	1	0	0
Nothing	2	0	0
Not quick enough	2	1	1
Don't know	2	1	1
Not on task/ not concentrating	3	3	3
Playing games	1	0	0
Home restrictions	0	1	0

Table 3 illustrates the students' increasing awareness of the impact of *Noise and distractions* on their capacity to learn successfully.

Comparison of Responses Relating to Learning Conditions

The gradual increase of responses that contained reference to *Not on Task/ Not Concentrating*, and *Concentration and Effort* was indicative of the students' growing awareness of themselves as learners. Evidence that this growth in self-knowledge was reflected in the students' work skills and attitudes was found in the colleague teachers' assessment records and anecdotal records. The apparent lack of consistent emphasis on the need for a quiet learning environment may be explained in two ways. Firstly, many students had not previous experienced much success in their English classrooms, as was evidenced by their assessment records from the previous teachers. As these students explored and investigated ways that they can individually develop work skills and practices that support their learning, they were not as confident or experienced at articulating what precisely would support them individually as learners. They may know for certain, however, that conversation, noise and movement in the immediate vicinity does impact negatively on their capacity to learn well. The other reason may simply be that teachers constantly promoted a workable degree of noise, indicating that no one in the room can think or work if the noise level is excessive. The responses may simply be a combination of both.

Table 4 Comparisons of Responses Relating to Learning Conditions

Responses	Number of student responses Interview One	Number of student responses Interview Two	Number of student responses Interview Three
a) Noise and distractions **b) Quiet**	a)16 b) 2	a) 19 b) 10	a) 23 b) 8
Nothing	a) 2 b) 2	a) 0 b) 2	a) 0 b) 0
a) Not quick enough **b) Quicker**	a) 1 b) 1	a) 2 b) 4	a) 1 b) 2
a) Not on task **b) Concentrating**	a) 3 b) 0	a) 3 b) 6	a) 3 b) 8

Table 4 illustrates the students' gradual awareness of the negative impact of *Noise and distractions* and the positive impact of *Concentrating*.

Table 4 shows the frequencies with which some common responses were recorded at each of the *Student Interviews* (Appendix A, page144). The responses were grouped using key words from the first hand evidence collected from the students.
Evidence to support these responses from the anecdotal records included these examples. A group of students working together celebrated the success of their work and attributed this to the contribution of one student's work towards the group's total project. The group leader publicly apologized to the student for not appreciating his work earlier. This student was previously excluded from the groups. Usually none of the students invited him to participate until the teacher intervened. The teacher did not orchestrate this incident, nor had any specific discussion on cooperation preceded the event. The colleague teacher and teacher/ researcher who witnessed this incident were completely astonished. What was also remarkable was that this student continued to be accepted and treated in this fashion for the remainder of the project, despite his eccentricities.

Students began to show interest in the accomplishments of others without being competitive. They were recorded having discussions about how they learnt differently. One student, who was extremely self conscious regarding his limitations in the English learning area, publicly attributed the attainment of one of his successful goals to another students who had helped him to monitor the quality of his work on a regular basis. It appeared that as the students began to achieve their goals, learn more about their own relative strengths and limitations and learning preferences, they became more accepting of the relative strengths and limitations of their peers also.

Their increased intrapersonal intelligence appeared to impact positively on the development of their interpersonal intelligence.

Other evidence to support the growth of interpersonal intelligence as the project continued came from the students' *Multiple Intelligences Profiles* (Appendix A, p 141) themselves. The students reflected a growth in the interpersonal intelligence section of their *Multiple Intelligences Profile* (Appendix A, page 141). The Paired T-Test (Table 1, p. 99) Pair 2 (Interf/Intern) showed p = .000, indicating that this result gave a high degree of probability. It appeared that the development of students' own self-knowledge was closely linked, as Gardner (1993a) suggested, to the development of the other personal intelligence.

This proved to be a considerable bonus as it provided a learning environment that served to further support and nurture the learners' efforts to be successful in the English classroom. That the others students were tolerant and accepting of individual differences made an extremely positive impact on the students as they struggled to achieve their goals. It appeared that in becoming more perceptive about themselves as individual learners, they became more appreciative of the diversity within the groups.

Conclusion

The colleague teachers' summaries of their various records show that the were developing greater awareness as learners and this was reflected in the students' demonstrated skills in starting work promptly, staying on task, even though it may be difficult, and completing tasks. The evidence provided by the students' responses indicated clearly that students had developed better skills at staying on task in

English, were more able to persevere when tasks proved to be difficult and had more success in task completion. They had developed a heightened awareness of the optimum learning conditions for each and were able to articulate clearly what conditions impacted negatively on their learning.

This evidence, combined with the strategies that the students had recorded as being their personal strategies, indicated an increase in students' awareness of the nature of learning and how to adapt their learning to meet their individual learning needs. The evidence in this chapter showed an increase in students' use of strategies and thinking that were both reflective and evaluative in nature.

It also indicated that as the students were gaining knowledge of themselves as learners, their appreciation of others as learners was developing also.

Chapter Seven

Students' Reflections and Own Perceptions of Relative Strengths and Limitations

This chapter seeks to examine the evidence that was gathered specifically relating to Hypothesis Four: *that students will develop better understanding of their relative strengths and limitations as defined by Gardner's intrapersonal intelligence.* Evidence for this hypothesis was sought in the *Student Learning Logs* (Appendix A, page 147), the comparison of the results of the *Multiple Intelligences Profiles* (Appendix A, page 141) that were compiled at the commencement and conclusion of the study and the summaries of the colleague teachers' records and anecdotal notes.

Students were able to achieve their goals. These goals were being achieved by the use of strategies that the students themselves had nominated and evaluated as useful or not for each of them individually. Students further developed these strategies so that they were applicable to an increasingly wider variety of tasks and goals. So what students actually did reflected their increasing self- knowledge as learners.

In the initial stages of the study some students also adapted their goals as they began to realize that those particular goals were not realistic for them at that time. This strategy became increasingly less and less used as the students became more proficient at determining exactly what they could realistically achieve within nominated timeframes. When individual students had two goals in place concurrently, they were demonstrating their understanding of their individual capacities to achieve some goals more quickly than others.

The entries in the *Student Learning Logs* (Appendix A, page 147) showed evidence of growing self-awareness. All the students achieved ratings in later entries that were higher than those in the initial entry. No student maintained consistently high ratings throughout the duration of the study. All students recorded entries that resulted in peaks and troughs when the ratings were individually graphed.

At the conclusion of the project, the procedure for developing the *MI Profile* (Appendix A, page 141) that was used at the commencement of the project was repeated. The results of the students' responses for the intrapersonal intelligence and interpersonal intelligence were then compared, using a more traditional method of interpreting data, a paired sample t-test (Table 5). The difference in the mean scores between the February responses to the questions dealing with intrapersonal intelligence and those given to the same questions in November differed significantly. The November mean score was significantly higher than the February mean score and p =.000, indicating that the probability for error in these results was extremely low.

Table 5 Comparison of Student Responses Intrapersonal Intelligence MI Profiles

Paired Samples Test

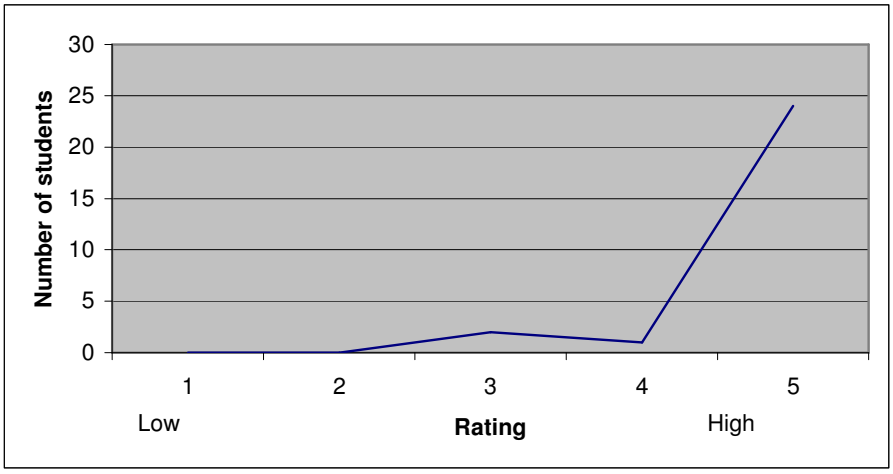
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	FEB - NOV	-2.0385	1.1482	.2252	-2.5022	-1.5747	-9.052	25	.000

Table 5 illustrates the increase in students' intrapersonal intelligence using the responses from The MI Profile, (Appendix A, page 137).

The colleague teachers' assessments reflected similar growth in knowledge of self. At the end of the study all the students appeared to have developed a better understanding of their relative strengths and limitations as defined by Gardner's intrapersonal intelligence (Graph 4, page 116). No students rated one or two on the colleague teachers' rating criteria. Two students, Students No 1 and No 10, were observed to have improved their awareness and rated three. Student No 27 consistently demonstrated her awareness of her relative strengths and weaknesses in the learning environment and rated four.

The remaining twenty-four students were all assessed to be consistently demonstrating their awareness of their relative strengths and limitations and taking initiative to ensure that they had availed themselves of the best possible learning opportunities and environment by negotiating the learning environment. They rated five. These students asked for appropriate resources, negotiated the learning environment to accommodate their individual learning needs and demonstrated initiative in the use and provision of resources requited to complete tasks in English successfully.

Graph 4 Teachers' Observations of Students' Increased intrapersonal Intelligence at the conclusion of the Study



Graph 4 illustrates the increases in individual students' intrapersonal intelligence as rated by the teachers using their rating scale

Incidental Findings

One other source of evidence that was not planned but evolved as a response to a participant's needs, were some badges (Appendix B, page 153). In classroom conversation towards the end of term three, Student No 24 remarked that the teacher /researcher had forgotten to write some detail on the blackboard for him, as he was aware that listening was not one of his strengths and without the visual reminder he could not independently complete the task. After some discussion the teacher/researcher agreed to make him a badge that could be worn as a concrete visual reminder to teachers that his listening skills needed visual support. The badge was designed to say *I learn better when you write it down*. On completion of his badge, however, the other students were anxious to be part of this non-verbal communication.

The information about students' self-knowledge communicated by the badges came quite by chance. As a result, other students recognized an opportunity to personalize

their learning environment also. When the students designed their learning prompts for their individual badges, they included ideas such as the following.

I learn better when there is quiet.

I learn better in a group.

I learn better when I am alone.

I learn better when I have my own space

The main ideas that were communicated by the badges not only allowed the students to further negotiate the teaching and learning environment, but also offered the students an opportunity to communicate their needs and learning preferences to their teaching and learning community in a non-verbal fashion. This was a considerable bonus for the students who found communicating their frustrations in a socially acceptable manner quite difficult. These prompts also reflected many of the ideas that students had identified as conditions that facilitated successful learning for them.

As a result any student who wished to wear a badge was permitted to go to the box and select it if they so desired. No one was compelled to wear a badge, nor did the badges have individual names on them. They were colour coded so the teachers could, at a glance; remind themselves of individual students' particular needs or preferences. Discussions with the colleague teachers revealed that the students had accurately determined their learning preferences and that their anecdotal records and observations confirmed this.

Discussion of the Evidence

Although occasional comments in the *Student Learning Logs* (Appendix A, page 147) can be cross -referenced to the teacher/researcher's and teachers' anecdotal records showing that the entries were made after specific activities or discussion, this does not detract from their value as evidence of growing self-knowledge as there was never any direct instruction to the students regarding the *Student Learning Log* (Appendix A, page 147) entries. The comments, may, in fact, have greater value, as the activities and discussions recorded in the anecdotal records made it impossible to allow time for the *Student Learning Log* (Appendix A, page 147) entries to be completed the same day. Consequently, the entries made after these sessions had been made after some reflection time.

The entries were arranged, after analysis, into three groups that shared common characteristics. The first group of six students started with scores greater than one and started to show higher scores in the first five entries. Although these students followed the general trend and did not maintain a single upward curve, they consistently entered comments that scored highly. It is reasonable to conclude that these students grew progressively more reflective. Their profiles as reflected by the *Student Learning Log* (Appendix A, page 147) entries indicate strong knowledge of themselves as learners.

The second group of nineteen students all had more than five initial entries of 0 or 1. At various stages higher scoring entries began to appear and these students were able to maintain higher scoring entries for the majority of the remaining entries, also following the general trend of no single upward curve. All these students had entries

that scored 5 on the scoring scale on more than five occasions. The profiles compiled as the result of scoring the entries of this group of students indicated that they made significant improvements in their ability to be reflective and strengthen their knowledge of themselves as learners.

This second group of students included many of the students who made remarkable progress in their organization, application, perseverance and general work habits and attitudes. The teacher/researcher's observations and the colleague teachers' records verified this. Student No 5 was one of these students. He made forty entries in his *Student Learning Log* (Appendix A, page 147). The first seventeen all scored one or less, the next thirteen entries all scored four or five, except two. Obviously some progress in reflection was occurring. Student No 6 was another extremely successful participant. He made twenty-eight entries, the first ten of which scored nothing, the remainder containing only three entries that scored nothing. His later entries included several that scored highly.

Student No 7 recorded forty- seven entries. These entries followed the general trend. The first eighteen scored one or less, but the remaining entries consistently scored more highly. Although not in this group, Student No 27, who had continued to be increasingly reflective, was also considered to be a child who had progressed extremely well throughout the project. She had become more focused, more independent and more organized. Her pattern of entries showed that after the initial three, she had consistently made reflections that scored highly.

The remaining two students who comprised the third group, although scoring occasional high scores for their journal entries, did not indicate significant progress in their knowledge of themselves as learners in their *Student Learning Logs* (Appendix A, page 147). The progress of Student No 10 had been monitored throughout the analysis of results. He appears to have specific difficulties in some areas. The other student, Student No 25, was the first student to indicate that the *Student Learning Log* (Appendix A, page 147) was the activity she liked best and she gave the reason that it helped her to see which things she found easy and what she found hard. Obviously the entries held more meaning for her than the teacher/researcher's scoring indicated.

The data provided by the comparison of the *Multiple Intelligences Profiles* (Appendix A, page 141) supplied evidence that the students were developing both a better understanding of their relative strengths and weaknesses as defined by intrapersonal intelligence and stronger intrapersonal intelligence itself, as the questions deal with both dimensions. Interestingly, Student No 27, in conversation with another during the development of the later profiles, declined to take a coloured square in response to the question *Do you usually plan what you want to do and then stick to it?* When asked why this was so, as she had obviously achieved her goals in English, she replied that she often made goals at home but didn't always stick to them, even though she invariably intended to do so. Although it was not possible to record on her profile, this participant obviously had accurate self – knowledge in this instance.

Student No 5 had acknowledged one area of strength in February, followed by four in November. This was a considerable shift in self- perception. Students No 6 and No 7 had recorded exactly the same. Student No 27 had two areas of strength in both

February and November. Her considerable self – knowledge, however, had made itself apparent in the formulation of the November *Multiple Intelligences Profiles (*Appendix A, page 141).

Details of several students who were studied in previous chapters were also investigated. Student No 1 had recorded no strengths in intrapersonal skills in the first *Multiple Intelligences Profile* (Appendix A, page 141) in February. He recorded four in November. He obviously felt that his intrapersonal intelligence had increased. His *Student Learning Log* (Appendix A, page 147) entries did not reflect this dramatic increase in self- knowledge, but it indicated a gradual, definite increase in a more reflective type of entry. This provided evidence that progress was made.

Student No 7 recorded two strengths in this area in February and four in November. Student No 9 recorded three then four strengths in February and November respectively. Student No 10 recorded none then three, Student No 11 recorded none, then two. Student No 12 recorded two strengths then four in November. Obviously, these students felt that they had become more aware of themselves as learners.

Conclusion

The development of students' intrapersonal intelligence was established through the examination of the evidence provided by the range of research tools used in this study. The students demonstrated their increasing self-awareness by using their own strategies to achieve the English learning goals that they set for themselves. They responded to the *Student Interview Questionnaire* (Appendix A, page 144) identifying strategies that facilitated successful learning and later provided the same ideas as

prompts for their badges. The colleague teachers' records indicated that these were an accurate reflection of the conditions in which these individual students learned most easily.

The *Student Learning Logs* (Appendix A, page 147) contained entries that indicated that the students were able reflect on their individual relative strengths and limitations. In addition, the *Multiple Intelligences Profiles* (Appendix A, page 141) provided the evidence that there was a significant increase in each of the students' intrapersonal intelligence.

Chapter Eight

Discussion of the Research Findings and Implications

This research study sought to investigate the role of intrapersonal intelligence, as defined by Gardner, in supporting students in their roles as learners. A review of the current literature revealed that a number of theorists and practitioners were attributing increasing importance on the role of intrapersonal intelligence in facilitating better student learning. Gardner (1999a) has frequently nominated sound, accurate, intrapersonal intelligence as an important, if not the most important, characteristic for development by learners in the Third Millennium. Some characteristics of successful learners were identified from the literature and the research hypotheses were developed with these as the focus. The study sought to establish that, as students began to develop increasingly more accurate self – knowledge, this intrapersonal intelligence would facilitate the development of skills that are characteristic of successful learners.

A number of research tools provided information from different sources. The evidence provided by the students themselves was extensive and particularly informative. By correlating the evidence from the variety of sources, sufficient data was obtained to support the research hypotheses. Evidence from the students in this study relating to setting goals, articulating and practising increasingly useful strategies by which to achieve these goals supported evidence from other sources. In addition, what the students felt, as recorded in their learning logs, combined with the MI profiles, the observations, formative assessment and anecdotal records compiled by

the colleague teachers and the teacher/researcher, blended together to provide a very detailed account of the students' progress in the English area.

The main finding of this study was that the students demonstrated improved skills indicative of their improved degree of intrapersonal intelligence. They also exhibited improved work skills. The study served to highlight the different ways in which students learn and the students' capacities to set goals, manage their classroom behaviours and individually determine strategies that facilitated improved learning in the English classroom. The goal setting process was a crucial element in the study. Gardner (1999a), Hine (2002) and Kaplin and Maehr (1999) stress the importance of students setting and achieving individual goals. As the students in this study became more adept at the goal setting process they began to use their knowledge of their relative strengths and limitations in English to determine the content of the goals themselves, set a realistic timeframe and nominate suitable strategies in order to achieve success.

In addition, the strategies that the students articulated gradually became less task specific and more generally applicable to a wider range of learning activities. In this way, students were increasingly able to develop the characteristics and strategies of successful learners. Ng 1998, (2000) and Chan (1992) highlighted the importance of students knowing how to learn. These students investigated and determined strategies that suited them as individual learners.

The skills students developed in setting goals and determining strategies allowed them to access and begin to develop skills in four of the areas that Lepani (1995) nominated

as capable of enhancing the capacity of the human mind in the Knowledge Era. Students learnt how they each learnt best and which strategies supported their learning preferences. They learnt how to customise generic ideas and products through their interactions with the Bloom's/ Gardner's matrix known as *The Intervention Program* (Appendix B, page 150). *The Intervention Program* (Appendix B page 150) provided students with opportunities to determine their learning strategies and discuss the effectiveness of their choices with their teachers. The program helped students to develop knowledge about their own learning, which could support them as life long learners.

Limitations of the Study

Gardner (1999b) is amongst many educational theorists who stress the importance of life long learning. He describes it as "a necessity" for success in the Third Millennium. However, in order to become lifelong learners, students need to have more extensive opportunities to explore self- directed learning than has been provided by this ten- month study. Patterson, Crooks and Lunyk-Child (2002) provide a detailed definition of self –directed learners. In order to firmly establish the characteristics that are nominated, it is reasonable to expect that students of this age and stage need to work in a similar teaching and learning environment to that created in this project, for longer periods of time and with different teachers.

If it were possible to establish the teaching and learning environment designed for this study as a school wide project, involving larger numbers of students and adult, then it would be possible to evaluate the students' capacity to sustain their self directed learning and even to determine the impact of this learning environment on students'

capacity to be metacognitive as defined by Anderson and Krathwohl (2001) and Dewar (1997).

Value of the Study

In addition to the benefits for the students as individual learners, which were analysed in detail to support the research hypotheses, there are a number of other reasons to consider the contribution of this research project. The students had also experienced the opportunity to learn as part of a teaching and learning community and support each other's learning. The development of the students' interpersonal intelligence resulted in two casual teachers, on separate occasions, commending the students on their personal and social skills in the English classroom.

The colleague teachers welcomed the opportunities to use all the strategies that formed the research intervention as professional development. The syllabus documents in all Key Learning areas, not just English, continue to stress the teachers' responsibilities to make the mandatory content and skills of which they consist, available to all learners. This study illustrated some ways in which this may be achieved for all learners in inclusive classrooms.

The action research methodology selected for this study does not easily facilitate external validity. However, many of the underlying principles and strategies that were utilised as the basis of the project could easily be used in other classrooms. The research tools were established as having both internal and external reliability and consequently may be used effectively in other learning environments, even though it is not possible to exactly replicate the study. In other teaching and learning situations

the students' needs and characteristics as learners, would influence how the action research would be implemented.

Implications Of the Study

This study serves to illustrate the potential that students have to develop the skills and characteristics of successful learners in English, even if they have experienced little or no success in this area previously. It clearly indicates that if students are provided with opportunities to develop accurate intrapersonal intelligence, this improved awareness of 'self' can have an impact on successful learning. The study indicates that if teachers provide students with opportunities to investigate and learn about themselves as learners, to build skills in goal setting and to identify personal learning strategies, then this increase in self- knowledge and self- management will impact positively on the students' capacity to learn successfully. By facilitating students' variety of learning preferences, supporting individual needs and accepting a range of learning strategies, teachers have the opportunity to acknowledge that students are 'smart' in a variety of ways. In addition, this study also serves to highlight the importance of self-reflection and self-evaluation in the learning process.

Conclusion

This research project strongly indicates that students who are encouraged to be proactive in their own learning by identifying their own relative strengths and limitations, investigating their own learning preferences, setting their own goals and achieving them using their own strategies increasingly develop their capacity to demonstrate the skills, behaviours and characteristics of successful learners, irrespective of their past learning experiences.

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Appendix A

Word	**Maths and Logic**	**Space and Vision**	**Body**	**Music**	**People**	**Self**	**Naturalist**

BLM : Multiple Intelligences Questionnaire

- Can you recognise and name many different garden plants when you see them ? (naturalist-green)
- Can you easily make friends and get along well with people? (people-blue)
- Can you correctly say what things you are good at and not so good at ? (self-yellow)
- Are you good at playing sport ? (body-brown)
- Can you easily recognise and name different songs? (music-red)
- Can you use good drawings or diagrams to show your ideas? (space & vision – purple)
- Do you find it easy to do maths problems? (logic and maths – orange)
- Are you a good reader? (word – white)
- Can you recognise and name a many of the animals that live in the wild? (naturalist-green)
- Do you have a strong interest in science and know quite a lot of scientific facts? (logic & maths-orange)
- Do you often understand why people behave like they do? (people-blue)
- Do you usually plan what you want to do and then stick to your plan? (self-yellow)
- Do you find it easy to play a musical instrument ? (music-red)
- Do you find it easy to learn a new sport ? (body-brown)
- Are you good at drawing things? (space & vision-purple)
- Are you good at writing stories or poems? (word-white)
- Do you know a lot of facts about different insects? (naturalist-green)
- Do other kids like your ideas and want to do what you suggest ? (people-blue)
- Do you find it easy to remember a song you have learned? (music-red)
- Can you usually make your body do what you want it to do when you're jumping, throwing, climbing or running? (body-brown)
- Are you good at decorating your projects and craft work in a way that others like? (space & vision-purple)
- Do you enjoy doing tricky maths puzzles? (logic & maths-orange)
- Are you better than many people at word puzzles and cross words? (word-white)
- Do you know a lot about how to care for animals and train them? (naturalist-green)
- Are you good at telling how other people are feeling (people-blue)
- Do you think a lot about why you behave like you do ? (self-yellow)
- Do you enjoy listening to music more than most other people you know? (music-red)
- Are you good at acting? (body-brown)
- Do you think a lot about the ways in which you are the same and different to other people? (self-yellow)
- Are you good at imagining how things will look before you make or draw them? (space & vision-purple)
- Do you enjoy doing experiments to see how things work and happen? (logic & maths-orange)
- Can you quickly and easily find good words to say just what you want to say? (word-white)

Source. McGrath,H. and Noble, T. (2003). 'Bounce Back! Classroom Resiliency Program'. Sydney; Pearson Education

Checklist of Student management and Behaviours

Assessment Criteria ---> Name:	Arriving on time	Bringing what each needs with him/her	Settling promptly on arrival		Beginning tasks promptly	Staying focused during task	Showing initiative	Completing work		articulating needs specifically	Discussing preferences in relation to learning	Making statements about themselves as learners		
	Organization				Focusing					Self				

Questions for Self

1.What would help you learn better in _____ class. If you could wish for something to make you a better learner what would it be?

2. Which activities do you like best? Do they help you to learn easier? What stops you learning well?

3. What is the area you are best at? Can you use this gift to help you in English work?

4. Do you write in your learning log? Do you like that? What sorts of things do you write?

5. Have you achieved any goals?

Teacher Interview Sheet

Q1 Has……improved in defining new learning goals in English?

Q2 Has……been able to articulate better skills in articulating how they can achieve own goals in English?

Q3 Has……been able to demonstrate better skills at starting work promptly, staying on task, perserverıng when the task is difficult and completing tasks?

Q4 Has……developed better understanding of their own relative strengths and weaknesses?

MY SMART GOAL CONTRACT

Name: _____ Date: _____

Specific

Be specific. Say exactly what you want to achieve.

I want to _____

Meaningful

Make your goal something that you really want to achieve.

I want to achieve this goal because _____

_____

_____

Actions

Say what you will do to achieve your goal

1._____

2._____

3._____

Realistic.

Choose a goal where there is a real chance you will be successful.

Tick the box to show the best reasons why you will be successful

I can do this because:

_____ can help me

I will work hard to learn

I will keep trying even if I make mistakes

I won't give up

Timed

How long will it take?

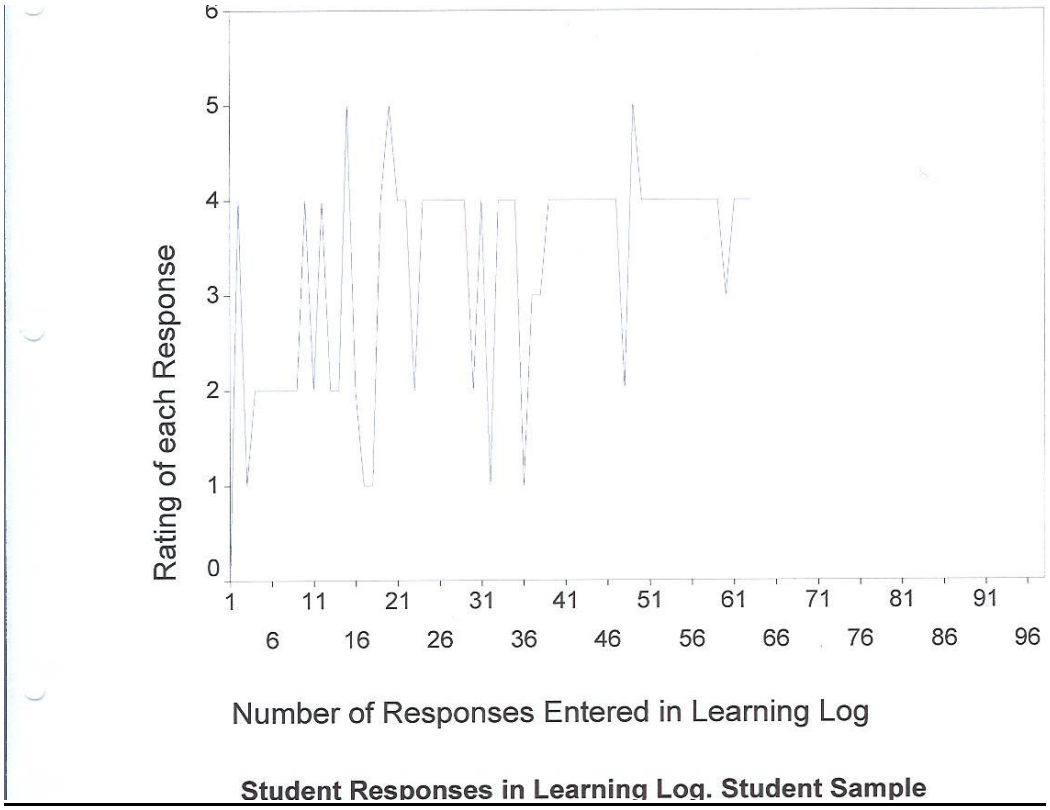
I think it will take me _____ days or weeks

_____

_____

Your signature _____ Teacher's signature:_____

Source. McGrath,H. and Noble, T. (2003). 'Bounce Back! Classroom Resiliency Program'. Sydney; Pearson Education



Student Responses in Learning Log. Student Sample

Student No 1. *Do my homework for a week. Learn my words. Get up early.*

Student No 2. *I just keep working hard.*

Student No 3. *I really get my mind to it and do it straight away- then I leave it to the past and try another.*

Student No 4. *I have a routine: swim, homework. Then I do what I like. I just put my head down and done it. Me and ……got together and told each other if it was neat o*

not. That helped.

Student No 5. *Mrs J. helps me practice my writing when I go to reading. What did I say the last time? Don't give up. I get my goal because I do things by myself.*

Student No 6. *Just did it. When I got back to school from……I was just lots brainier and I didn't need to practice.*

StudentNo 7. *Worked hard. Kept remembering what I had to do. Just kept it in my mind.*

Student No 8. *I practiced doing margins and I read a bit every night.*

StudentNo 9. *I read my books each night. I forget how many weeks. Just one thing a night. Monday- dictionary, Tuesday- stories, Wednesday-words, learn spellings,*

Appendix B

						rotate so each student has a turn at each responsibility.	Record own progress on Steps to Success chart. Write/say what being organized means for you? How are things organized in each household?	
Analysing	Analyse words given and construct a spelling rule from your ideas. Check characteristics of text to determine text types. Compile character profiles of story characters Write the characteristics of good handwriting. Write a definition of decoding. Devise a short procedure for decoding. Use dictionary words in sentences that show their meanings.	Determine if a spelling rule applies to certain words or not. Differentiate between the various sounds the same letters can make. Group common sounds. Make graphs of words using common sounds for columns. Make Venn diagrams of words to show commonalities and differences. Discuss the MI profile graph to determine relative strengths and weaknesses. Complete relative strengths	Match spelling words with shapes. Tell a story from pictures. What happens when the letters in a word are changed at the beginning, middle or the end. Read stories through the illustrations. Complete learn and grow sheets. Make and complete before, middle and after from the accompanying questions and answers. What are the keys to my success?	What given characters might behave like, how they might do and say things. How do you learn new games/ physical activities? What are the bodily characteristics of good presenters? What happens when I do things to learn?	Select music that is suitable for exercises, reflection time, quiet reading time etc. Choose percussion music to indicate the various sequences in text types. Identify tempo that suits the spelling words each week. Identify feelings associated with different types of music. Write how to substitute spelling words for song words	Identify the characteristics of successful groups. Nominate behaviours that detract from group cohesiveness and productivity. Find commonalities and differences in the groups. What makes differences good, important, useful in groups? What do you notice now about other that you hadn't noticed previously in their appearance or in their strengths?	Make a list of commonalities and differences between yourself and one or two friends. Write several I can ..statements. Complete I learn best when ……statement. Select the best ways to learn spellings and spelling rules. Identify own strengths and weaknesses and, make MI profiles. Identify Learning preferences. Complete I learnt to……because.. for each skill. Make a personal	How does nature organize herself in order to survive, sustain the species and respond to the seasonal changes? Make a list of statements. What would happen if nature did not do this? Is there a lesson for us about being prepared for changes in order to survive comfortably? Give examples. Determine a good place for a class photo to be taken outside. Give reasons. How does your family respond to
				are difficult to be interested in.			Why are you able to do the chores?	How do we organize ourselves in order to cope with different weather, seasons, situations?
Applying	Seek out words from any source for spelling a list formation. Compile spelling list from all groups' lists. Complete spelling activities, handwriting practice, comprehension activities Practice text types using the guided books. Find dictionary meanings. Read the texts from the MI list and discuss the implications in the stories.	Play hangman, other spelling games which focuse on number of letters in words Select random beginnings , events and characters and swap one or two with neighbours Practice word building. Revise SMART goal process sequence. What does CHAMP mean? What does SMART mean? What does TEAM mean?	Play flashcards games. Draw shapes of spellings. Play spelling games on blackboard Do word finds. Sequence pictures into stories. Find pictures to match spelling words or theme Investigate genre wheels. What signs can be made by students that carry a universal message. Is our writing the same as other cultures, ancient writing. (include the Japanese teacher) Make flappers.	Skip spelling, call spelling whilst kicking a ball against a wall, throwing and catching a beanbag etc. Practice cross-lateral exercises, kinaesthetic exercises. Play spelling games. Role play stories. Make biscuits. Play quicksnap. Play champs ball game. Play ID game for various people in story, words etc.	Sing the spellings Sing the sentences made from spelling words. Clap out the pattern in word families. Sing as you work. Replace a word in a favourite song with a word that rhymes. Sing along as it fits into the song. Substitute spellings for words in popular song.	Make groups for a variety of activities. Allow lots of partner work. Set up groups with badges that have role definitions as them. Change roles in the group regularly. Use listening triangles, inside outside circles for discussion. Use talking chips for groups. Make classroom yellow pages. Play English games in teams. Do tag reading. Write a group story. Set up co-operative groupings. Assign roles in groups that	Make comment letter for each child. Make a diary. Conduct a person search to find out who likes, dislikes the same things as you. Find some in the same birth month and compare colouring, height, physical characteristics. Make Who am I? Leave room underneath for others to guess and write who they think it is. Learn guided imagery. Have silent reflection time. Answer MI questionnaire. Record goals achieved on display.	Make a seasonal chart. Include a picture of an activity that birds, plants and people do at that time of year. Make a series of landscapes and arrange in the order of the seasons, starting with the current season. Put yourself and your family in the landscapes doing something that the reflects the changes in seasonal conditions.

Intervention programme designed for The Affective Component in Education. Maura Sellars

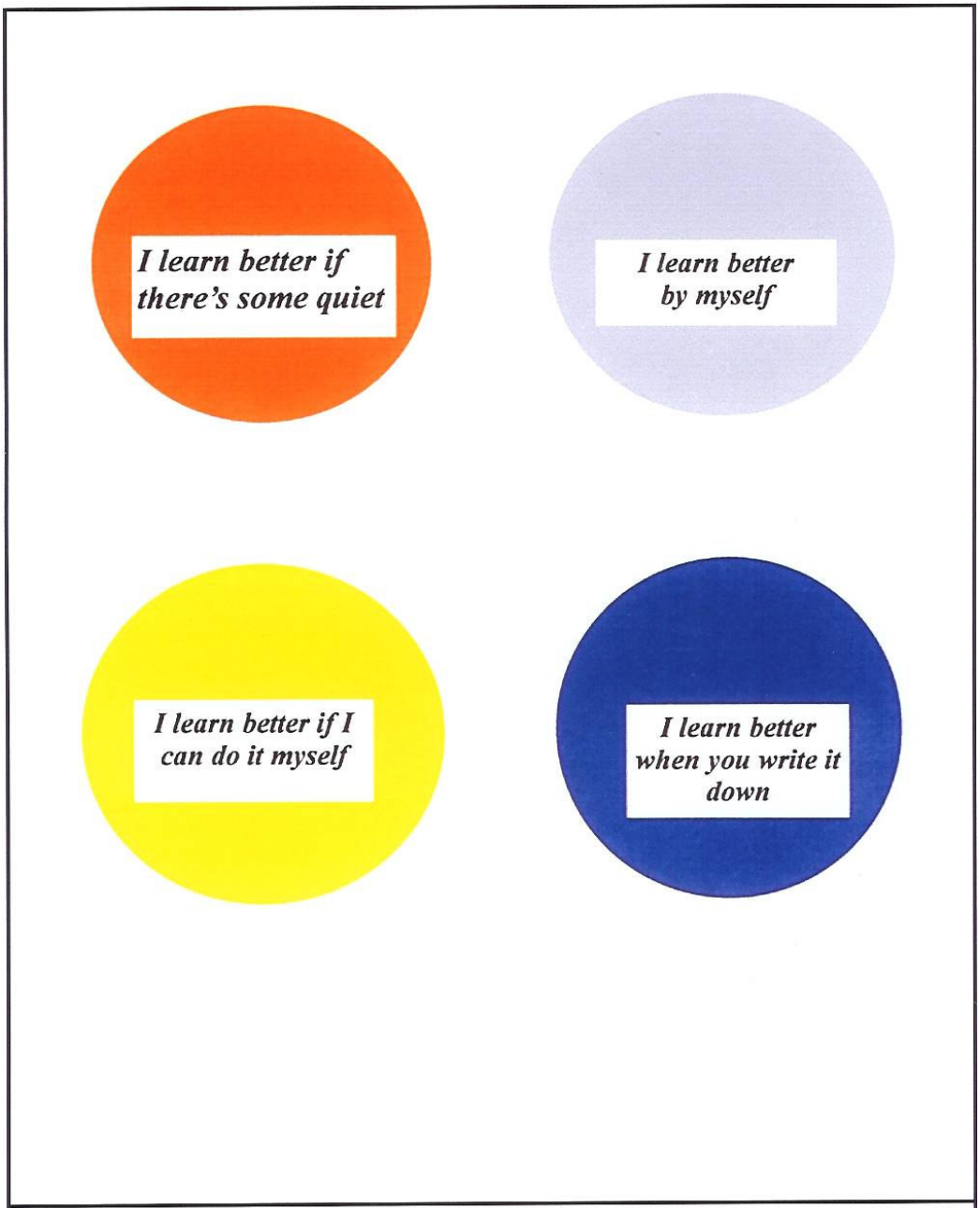
	Verbal/Linguistic	Logical/ Mathematical	Visual/Spatial	Bodily/ Kinaesthetic	Musical/ Rhythmical	Interpersonal	Intrapersonal	Naturalist
Remembering	Recall various sounds already learnt. Recall story details Recall characteristics of text types.	Recall the steps in a narrative, procedure, speech.	Recall sight words. Draw shapes of letters in the air. Remember where visual clues are found. Recall the signs in the community.	Remember your favourite activity. Recall all the spelling games and word games you know. Recall who likes team games, individual sports/ dance and who enjoys all or none of these.	Recall clapping and singing rhymes. Indicate favourite songs. Recall favourite nursery rhyme and where you learnt it. Recall any songs about champions you have heard.	Recall working together in groups, classes, families, teams, dance troupes etc. Remember the names of the children you played with, liked or disliked at preschool, in your street, at kindergarten or in Stage One.	Recall favourite times at school, home, with families, friends, alone. What skills and talents have you developed over the years? Who looked after you before you could do things for yourself?	Recall what happens in nature in the morning and in the afternoon / evening. Do regular things happen at your home at these times?
Understanding	Work out which sounds blend together to make new sounds. Make relationships between new sounds and known sounds. Look for commonalities and differences in text types	Count letters in spelling words. Check and see if a procedure will work or not. Counting on Frank: Find the title clue. Retell story in sequence. Group rhyming words. Write meaning for persistence.	List the characteristics of each letter, how where the join is. Break words into syllables then blend back together. What do community signs tell us?	Discuss different roles in baking activity, other activities or team games. Discuss using strengths positively. Brainstorm ways in which strengths could be used whilst doing English activities that	Chant the spelling words. Clap out the Syllables in the words. Do cross laterals etc to suitable music. Play champ songs.	Investigate how each group stays together, what they do together? How do people help each other? What is not helpful to group harmony?	What were you doing during favourite times? What were others doing? Why was it a favourite time? Who helped you develop these skills and talents? What chores do you have at home?	What do birds/ animals, plants, reptiles and all of nature do as the seasons begin to change? How do they cope? Do they just do the same things irrespective of the season, weather, habitat etc?

	of text types. Compare speeches Compile spelling lists and activities Make own books.	Create story timelines. Create new spelling games that involve number of letters in the words. Organize sense personal rules of how best to reach your goals, step by step. Create personal sequence for goal scoring.	Illustrate a story, procedure or other text type. Create genre wheels. Make a resource hand. Draw yourself in the process of achieving your goal. Draw yourself when you have achieved a goal. Make a business card for yourself promoting your relative strengths.	interest. Create a mime depicting spelling words. Make a dance routine for the spelling words. Use your physical skills to help in the English area. Create any games to help you learn better. Create mini games with rules and instructions, role descriptions for each player. Play it.	characteristics, grammatical terms. Create sound effs for spelling rules, stories, and different text types. Create a song list For each group of spellings, so that everyone can make some substitutions.	Make three group rules. Create a group badge, logo or cartoon.	the weekly homework. Create personal learning goals and strategies. Write reflections in Learning Log. Make a personal logo, homework sheet. Make a sheep scroll. Devise a personal plan to enable you to become a better learner.	soon, before the end of term, before the end of the year, before your next birthday. Create a personal timetable of what you need to do when you wake up, before you set out for school, ect. Make a list of how you get organized for hot weather, cooler weather, different conditions and places.

	accuracy of the text type activity, purity differences of opinion.	Evaluate the degree of difficulty of own goals for yourself. Score 1-3 Plot the sequence of progress in each goal to determine which strategies worked, which are relative weaknesses and strengths.	goals scored display. Give reasons for responses. Why do my keys to success differ to some others/ are similar to some others? Why do my keys to success work for me? Give three reasons.	that help you learn best? Evaluate yourself as a presenter using agreed criteria. What are the differences when I do things to learn? Complete questionnaire. I am happier doing my English homework Y/N I have learnt to read and spell more new words Y/N This is fun Y/N I am learning better Y/N	when you are happy, tired, cross, sad etc. Give reasons. Evaluate the groups' favourite music using criteria to do with feelings. Validate choices. Evaluate the procedures for substitutions on a score of 1-5, depending on clarity and accuracy. How much easier is it to learn if there is a music activity? Score 0-5. Give reasons.	activity and score from 1-5 according to performance of group. Criteria should be negotiated with students so they are fully understood.	interaction and make suggestions for variations in environment, content and delivery of lessons. Evaluate own work on given criteria, proof read and check written work. Do spelling tests. Evaluate own organizational skills at home, at school, in the morning, after school. Use agreed criteria after brainstorming. Will being organized help me learn better? Validate yes or no answers with reasons. Do my personal strengths help me become a better learner? Give reasons.	strategies in responses to changes you have to make everyday. How organized are you? Rate 1-5 and give reasons and examples. Does looking at how the natural world prepares and organizes itself for changing conditions help you understand the process of being prepared and organized? How?
Greeting	Create comprehension questions using Bloom's cubes. Create a variety	Create questions from the idea given that proved not to be a question.	Make a cartoon that tells a story. Make a find a word.	Make a board game about spelling, text types, grammar. Other areas of	Create a rap, song or Rhyme for some of the spelling words, text type	Create own criteria for group evaluation. Make a group mat.	Create personal development chart. 0-7yrs Create own work schedule from	Create a wish list of things you wish to get organized straight away.
		checklist.					strengths list. Name emotions. Do I know what caused me to feel that emotion?	changes in seasons, places or people? How do you get organized for changes in seasons, places or people? Create a personal list of things you could organize better by yourself, a list of those you could organize better with help and a list of those things that are very difficult for you to organize. Nominate the time of day that you felt best able to organize yourself. Give examples of times when you are not able to organize yourself well. Why is this so?
Evaluating	Check the rules. Are they able to be complied consistently? How many exceptions are too many? Check the	Check the sound activity above for accuracy. Determine if other groups' questions are valid or not.	Evaluate the usefulness of visual clues for each person. Give reasons. Evaluate the usefulness of the	Which activities you enjoy the most. Give reasons Are the activities you enjoy the ones	Why does the chosen music suit or not suit the purpose, give reasons. Which music suits you best	Evaluate group performances give reasons for the statements. Use sets of criteria specific to each group	Evaluate own work habits, goals and strategies on several criteria. Evaluate the classroom	Evaluate nature's strategies to survive comfortably with changes. Rate 1-5, give reasons. Evaluate own

GOALS


Steps to Success
1
2
3
4
5
What's the time?



Examples of Student Badges

Appendix C

ACU National

Human Research Ethics Committee
Expedited Review
Approval Form

Principal Investigator/Supervisor: Dr Shukri Sanber	**Campus:** Sydney
Co-Investigators:	**Campus:**
Student Researcher: Ms Maura Sellars	**Campus:** Sydney

Ethics approval has been granted for the following project:
The Affective component in effective learning.

for the period: 15.09.02 to 01.11.02

Human Research Ethics Committee Register Number: N2002.03-13

subject to the following standard conditions as stipulated in the *National Statement on Ethical Conduct in Research Involving Humans* (1999):

(i) that Principal Investigators / Supervisors provide, on the form supplied by the Human Research Ethics Committee, annual reports on matters such as:
- security of records
- compliance with approved consent procedures and documentation
- compliance with special conditions, and

(ii) that researchers report to the HREC immediately any matter that might affect the ethical acceptability of the protocol, such as:
- proposed changes to the protocol
- unforeseen circumstances or events
- adverse effects on participants;

and subject to the following special conditions being met, as stipulated by the Human Research Ethics Committee:

General Information
- Please complete sections A.1 to A.5, D.5.3 and D.5.4.
- Clarification is needed as to whether this application is solely for the work with students, or also for the questionnaire to be completed by the parents – as indicated in the proposal. If the latter, copies of the questionnaire, information letter and consent forms for parents need to be provided to the Committee.

Gathering, security, disposal of data; dissemination of results
- At E.2.2 : Research data held by researcher should be distinguished from primary data held by teachers and/or owned by students. The data held by the researcher should be stored in a locked cabinet at the supervisor's office at ACU.

Information Letter to Participants
- This letter needs a header : Information Letter to Parents.
- Clarification is needed because the letter contains a second supervisor who is not listed in the application form.
- Wording should be "This study has been approved by...".

Issues Concerning Consent (including consent form)

- In gaining consent for this study there are several levels of consent required: 1. consent of Catholic Education Body; 2. consent of school; 3. School to seek consent of parent to identify under-achieving pupils to researcher; 4. consent of parents; 5. assent of child participants. The researcher does not appear to have addressed all levels. The Committee would like information indicating that full consent has been gained.
- Consent letter needs header : Parent's Copy; Researcher's Copy.
- Please adjust consent letter title so that only "supervisors" appears, and investigators is removed. Also, add space for signature/assent of child indicating her/his willingness to participate. Remove "if applicable" from Student Researcher signature (as she is conducting the research).

The Principal Investigator / Supervisor is requested to note the following comments:

Other Ethical Issues

- For future ethics applications, please proof-read prior to submission for spelling errors etc.

Within one month of the conclusion of the project, researchers are required to complete a *Final Report Form* and submit it to the local Research Services Officer.

If the project continues for more than one year, researchers are required to complete an *Annual Progress Report Form* and submit it to the local Research Services Officer within one month of the anniversary date of the ethics approval.

Signed: ..... Date: 28/8/02
(Chair, Expedited Review Panel, HREC)

TO BE COMPLETED BY THE PRINCIPAL INVESTIGATOR OR BY THE SUPERVISOR AND STUDENT RESEARCHER

The Principal Investigator, or the Supervisor and Student Researcher, are to sign, date and return this form to the local Research Services Officer. Evidence of compliance with any special conditions set by the HREC should be provided when the form is returned. Please note that data-collection must not commence until the stipulated special conditions have been met.

The date when I/we expect to commence contact with human participants or access their records is: 14/10/02

I/We hereby declare that I/We am/are aware of the principles and requirements governing research involving human participants, as expressed in the Human Research Ethics Committee's *Guidelines*, and I/We agree to the standard and special conditions (if applicable) stated above.

Signed: ..... Date: 11/10/02
[Principal Investigator or Supervisor]

Signed: ..... Date: 3/10/02
[Student Researcher]

ACU National

Human Research Ethics Committee
Expedited Review
Approval Form

Principal Investigator/Supervisor: Dr Shukri Sanber	**Campus:** Sydney
Co-Investigators:	**Campus:**
Student Researcher: Ms Maura Sellars	**Campus:** Sydney

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(Chair, Expedited Review Panel, HREC)

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The Principal Investigator, or the Supervisor and Student Researcher, are to sign, date and return this form to the local Research Services Officer. Evidence of compliance with any special conditions set by the HREC should be provided when the form is returned. Please note that data-collection must not commence until the stipulated special conditions have been met.

The date when I/we expect to commence contact with human participants or access their records is: 14/10/02

I/We hereby declare that I/We am/are aware of the principles and requirements governing research involving human participants, as expressed in the Human Research Ethics Committee's *Guidelines*, and I/We agree to the standard and special conditions (if applicable) stated above.

Signed: ..... Date: 11/10/02
[Principal Investigator or Supervisor]

Signed: ..... Date: 3/10/02
[Student Researcher]

I confirm that the special conditions stipulated by the HREC in relation to the commencement of data-collection have been met and that the conditions to be adhered to in the course of the project have been acknowledged by the researcher/s.

Signed: ..... Date: 17/10/02

AUSTRALIAN CATHOLIC UNIVERSITY

TITLE OF PROJECT: THE AFFECTIVE COMPONENT OF EFFECTIVE EDUCATION.....

NAMES OF STAFF SUPERVISORS: DR SHUKRI SANBER .....
DR TONI NOBLE

NAME OF STUDENT RESEARCHER : MS MAURA SELLARS

AND NAME OF PROGRAMME IN WHICH ENROLLED: M.ED.(RESEARCH).....

INFORMATION LETTER TO PARENTS

Dear Parents,

As you are probably aware the children have had a special programme implemented in their English groups. This intervention was designed to meet the specific needs of these groups of students. It was created to build on their strengths in order to improve their performance in a variety of areas. These areas include setting appropriate goals, finding ways that they could meet their goals on an individual basis, self-knowledge skills and skills in organizing themselves in a teaching /learning situation.The ultimate aim of the intervention is to lead students to an understanding of themselves as learners and develop their awareness of themselves as thinkers. In addition, it is hoped that students are empowered to recognize their own strengths and use them to maximize their success as learners in the classroom. In order to establish how useful and successful the special programme has been, I am seeking your permission to access your child's results and assessments of behaviors and performances that have formed part of the ongoing records of your child's English teacher, and to use my own observations of your child's progress gathered on the occasions I have been responsible for your child's English lessons.

The intervention has been incorporated into the usual structure of the English lessons and will not involve any risk or discomfort to the participants.

There will be no other demands on the student during the class time or their out of class time.

This is an opportunity for me to assess the effectiveness of the activities designed and it will provide valuable information concerning students' needs. The results will assist me when designing intervention activities for the future. It will result in a heightened awareness of the importance of intrapersonal skills for the participants and enable them to be more organized, focused and successful. It will also will be of benefit to the school and community as it will provide useful strategies to facilitate student learning. The results will be the basis of education masters thesis and a copy of this will be available at the school on completion.

You are free to refuse consent or to withdraw your consent at any time without having to justify your decision.

Your child's records and identity will not be made public. No other person other than the teachers themselves will have access to this information. I will need this information for English only. All the scores will be tallied together anonymously in order to protect the student's identity and provide data

with which to assess the activities. Any work samples reproduced for analysis will be kept anonymous.No individual student or smaller group of students will be able to be identified from the data,work samples, or the resultant report.

Any questions regarding this project should be directed to Dr.Shukri Sanber, Dr.Toni Noble or Maura Sellars.

Dr.Shukri Sanber
02 97014194
In the school of Education
Mount Saint Mary Campus
25A Barker Road
Straithfield NSW
2135

Dr.Toni Noble
02 97392246
In the school of Education
Mount Saint Mary Campus
25A Barker Road
Straithfield NSW
2135

Maura Sellars
02 49903152
St.Patrick's School
155 Wollombi Road
Cessnock NSW
2325

I am happy to meet with you to discuss the results of the project if you wish.

This study has been approved by the Human Research Ethics Committee at Australian Catholic University.

In the event that you have any complaint or concern about the way you have been treated during the study, or if you have any query that the investigator or Supervisor and Student Researcher has (have) not been able to satisfy, you may write to the chair of the Human Research Ethics Committee care of the nearest branch of the Research Services Unit.

NSW/ACT: Chair, HREC
C/o Research Services
Australian Catholic University
Sydney Campus
Locked Bag 2002
STRATHFIELD NSW 2135
Tel: 02 9701 4159
Fax: 02 9701 4350

Any complaint or concern will be treated in confidence and fully investigated. The participant will be informed of the outcome.

If you agree to participate in this project, you should sign both copies of the Consent Form, retain one copy for your records and return the other copy to Maura Sellars.

Sincerely,
Maura Sellars

AUSTRALIAN CATHOLIC UNIVERITY

Parent Copy

TITLE OF RESEARCH PROJECT: Affective component of effective education .....

NAMES OF RESEARCHER MAURA SELLARS:

..... *(the participant) have* read (or, where appropriate, *have had read to me) and understood the information provided in the Letter to the Participants and any questions I have asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I can withdraw at any* time (or stipulate the deadline by when the participant may withdraw).

I agree that research data collected for the study may be published or provided to other researchers in a form that does not identify me in any way.

NAME OF PARENT/GUARDIAN .....
(block letters)

SIGNATURE ..... DATE.....

I would like to be part of the research

NAME OF STUDENT .....

SIGNATURE..... DATE.....

*NAME OF AUTHORISED REPRESENTATIVE .....
(block letters)

SIGNATURE ..... DATE.....

NAME OF RESEARCHER .....
(block letters)

SIGNATURE ..... DATE.....

AUSTRALIAN CATHOLIC UNIVERITY

Researcher Copy

TITLE OF RESEARCH PROJECT: Affective component of effective education .....

NAMES OF RESEARCHER MAURA SELLARS:

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SIGNATURE ..... DATE.....