

# **A pedagogic analysis: Middle years of schooling and the role of creative practice**

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## **ABSTRACT**

### **A pedagogic analysis: Middle years of schooling and the role of creative practice**

The purpose of this thesis is to identify classroom strategies which stimulate student engagement. It reports teaching and learning approaches which support the development of creativity in the learning of young people in the middle years of schooling. This thesis presents a case study of one teacher who attempted to improve student engagement, collaboration and thinking by changing teaching and learning practices in a Year 5/6 classroom. Phenomenology methods were used to understand the young people's perceptions of their classroom environment and to reveal their experiences as they occurred. The data collection included photographs, tapes conversations, case writing and interpretive case writing to provide a rich and comprehensive description of teaching and learning in one classroom. Analysis of data is situated in the theoretical characteristics of creativity developed from an extensive literature review. The analysis resulted in the proposition of six points of meta-analysis which map the experiences of the participants. This meta-analysis structured the writing of the interpretive case which contains the findings from the research. By researching the cultural values and mindsets constructed and maintained by teachers and students, it is anticipated that further insight into the challenge of introducing creative strategies into everyday classrooms bound by standards based curriculum can be reached. This study revealed the dilemmas, approaches and small steps towards success experienced in dealing with those challenges teachers face when implementing pedagogic change. It suggests the possible place for creativity in schools can be supported through strategies for improving student engagement, collaboration and teaching and learning outcomes.

## MASTER BY RESEARCH DECLARATION

'I Ingrid Liska, declare that the Master by Research thesis entitled *A pedagogic analysis: Middle years of schooling and the role of creative practice* is no more than 60,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.'

Signature

Date

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## Table of Contents

Title.....	1
Abstract.....	2
Master by research declaration.....	3
Acknowledgements.....	4
Table of Contents.....	5
List of Figures.....	6
List of Tables.....	7
Chapter 1 Introduction.....	8
Chapter 2 Literature Review.....	19
Chapter 3 Methodology .....	70
Chapter 4 Findings.....	96
Chapter 5 Interpretive case.....	151
Chapter 6 Conclusions.....	184
References.....	200
Appendix 1- Case 1.....	217
Appendix 2- Case 2.....	227
Appendix 3- Case 3.....	235
Appendix 4- Case 4.....	243
Appendix 5- Case 5.....	255
Appendix 6- Case 6.....	266
Appendix 7- Case 7.....	281
Appendix 8- Case 8.....	295

## LIST OF FIGURES

Figure 1: Systemic approach to creativity, an interpretation from Csikszentmihalyi (1996, p. 27).....	27
Figure 2: Flow chart summary of the data collection and analysis procedure used for this research.....	87

## LIST OF TABLES

Table 1: A summative model of definitions of creativity.....	37
Table 2: Assessment strategies of creative learning.....	63
Table 3: Demonstration of case analysis.....	115
Table 4: Research questions addressed by the meta-analysis.....	141

# CHAPTER 1

## INTRODUCTION

Education has the capacity to engage students in those discourses which support thinking, creativity and innovation, active citizenship and lifelong learning. Yet, many students in Australian schools (Hartely, 2006; Prosser, 2006) are not developing and applying curriculum which consistently and explicitly supports this learning. There is widespread acknowledgement that despite the reforms (Dimarco 2009; ConsultQld; 2004) to encourage young people's engagement in learning, especially in the middle years (Years 5-9), many students are leaving school without realising their academic potential, nor are they prepared for participation in lifelong learning. These factors greatly impact on their future capacity for socio economic success.

These outcomes from the school experiences of many young people in our community emphasise how teachers can respond to students' individual needs and interests, and how they might draw on innovative or creative learning approaches to do so. For example, such approaches can occur in learning environments where creative pursuits are valued and encouraged via innovative or creative pedagogies. In particular, the characteristics of creative pedagogies and the conditions for engaging in creative learning embody many of the practices in goals for the middle years of schooling. While schools acknowledge the need for improving pedagogic practices to meet student needs, there are challenges on many levels, including restrictive timetables, acceptance of something different and a standardised curriculum, all of which affect the possibilities for change.

This thesis presents a case study of one teacher who is attempting to introduce change in pedagogical practices in a middle years classroom to improve student engagement, collaboration and thinking. It identifies those classroom strategies which stimulate student engagement, and

reports the conditions for teaching and learning which might support the development of creative practices of young people, as described by the UK Office for Standards in Education (Ofsted) (2010), Chell and Athayde (2009), Csikszentmihalyi (2008), Hartley (2006) and Craft (2003). This study specifically focuses on creative pedagogic strategies because they offer a way in which teachers and learners can establish and practise many of the conditions for more engaging learning environments. By researching the cultural values and mindsets constructed and maintained by the school, teacher and students of this study, it is anticipated that further insight into the challenge of introducing creative strategies into everyday classrooms bound by standards based curriculum will be reached.

This particular research inquires about a teacher's practices and the type of classroom environment which could support creative learning in the middle years of schooling, specifically in Years 5 and 6. For this study, classroom teacher, Chris (pseudonym), was employed by principal Jones (pseudonym) because of her reputed ability to enhance students' engagement, and to improve learning and teacher performance through implementing innovative practices. The research reports Chris' experiences as she introduces new pedagogical practices into her classroom. It is important to highlight that while this teacher attempts to find opportunities to implement innovative pedagogy in her Year 5/6 classroom, it is not without difficulty. The struggles experienced by this teacher when practising pedagogic change are largely due to school and curriculum structures that are resistant to change and are bound by accountability standards. These issues cause the real difficulties of being creative or innovative in education, despite the best of intentions. Chris' experiences also included low collaborative cohesion of staff, lack of school resources and funding to even provide a weekly Arts program as the school was situated in a low socio-economic area of the outer western suburbs of Melbourne. This teacher's story is not unusual, and it presents the learning and teaching conditions and restriction of curriculum shared by many teachers in similar

school situations, as shown in recent research from Hipkins (2011). In particular, the study reveals insights into the conditions and experiences which may be faced by many teachers who value change, and whether or not every day classrooms can support strategies for creativity and innovation as a way for learners to be engaged and motivated in classrooms.

Creative pedagogies can be an alternative way of modeling lifelong learning for young people encountering a society and its culture that are being re-created by globalisation, technology, the economy, enhanced accountability systems and the consequences of making choices. Research by Hartley (2006) and the National College for School Leadership (NCSL) (2005) describe creative pedagogies as a powerful way of engaging young adolescents in the collaborative and substantive discourses which inform choice and accountability for those choices. Gresty (2009) proposes that:

We need to provide future generations with the skills for innovation to a greater degree than ever before: the confidence and insight to generate a novel idea or new approach; the motivation, commitment and resilience to pursue that idea; the leadership, energy and dynamism to communicate their vision to others and drive it forward from concept to reality (Gresty in Chell & Athayde, 2009, p. 2).

Recent research by Ofsted (2010) provides relevant evidence of how curriculum development can promote pupils' creative learning as an enhancement of National Curriculum rather than as an alternative to it. The study reports that:

In secondary schools visited, the survey found similarly persuasive examples of the positive impact of creative learning on students' motivation, progress and attainment. With this rather different approach, many students with previously low attainment and disaffection gained confidence and then competence in working towards accreditation to prepare them for future employment (Ofsted, 2010, p. 17).

Hence, the practice of creative learning in the middle years of schooling (Years 5- 9 or 10-15 year old students) is of particular interest to developing classroom environments which could be supportive of creative pedagogies in Australian schools.

## **Aim of Chapter**

The aim of this Chapter is to introduce the research topic by clarifying, through reference to the literature, the understandings of creative teaching and learning practices and their place in middle years' pedagogic practice. This Chapter is divided into two parts. First, a brief discussion outlining the current context of creativity will establish the importance for creative pedagogies and learning outcomes in the middle years. Here, a short focus on the current social and educational context will highlight the challenges for teachers, learners' needs, futures learning and the relationship between teachers and students in the middle years of schooling. The remainder of the Chapter will define the specific significance this study offers to current research, and identify the guiding research questions used when examining learning practices, such as creative learning and classroom practice.

## **Current context of creativity and the middle years of schooling (Years 5-6)**

The term *creativity* has been used by Ofsted (2010), Starko (2004), Craft (2003), Mitchell (2003), Bresler (2002) and Yashin-Shaw (2001) to describe a dimension of the nature of creative pedagogies which involved problems, thinking and solutions. For these authors, creativity consists of:

- finding problems, possibilities or issues that have extrinsic and intrinsic value by questioning and challenging;
- generating ideas for addressing those problems;
- making connections and seeing relationships by exploring problems;
- reflecting critically on ideas, actions and outcomes;
- evaluating ideas, processes and products generated;
- containing relevance of product and process and offering a solution;
- not just a synonym for non-conformity as its relevance is definitive of the processes used

to evaluate its significance and effectiveness; and

- possessing skills of self-identity and autonomy; flexibility, originality, elegance of problem solving, and risk taking when solving or approaching problems.

According to Csikszentmihalyi (2008, 1996), Craft (2001), Cropley (2001) *creativity*, *dynamism* and *self* are the dimensions that embody the nature of creative pedagogies. Creativity is described as a practice that involves processes of thinking about thinking, seeking problems and solutions for innovation and change. Therefore creativity is *dynamic* and changes as new ideas and thoughts emerge from an environment that is flexible with time, knowledge and changing risk taking capacities, and which values the process of creativity itself. Creators are largely motivated to be innovative or creative when they are engaging in the dimension of *self*, that is, self-identity and autonomy, which are developed and re-created during and for creativity.

In a school classroom context, these understandings of creativity play an important role in the engagement of students in learning. The provision of opportunities for young learners to develop personally reflective, metacognitive and creative thinking skills is imperative for the teaching of middle schooling students, specifically Year 5/6 students in this study, as it is a period when thinking patterns and behaviours are established for the short and long term (Barratt, 1998). If too few opportunities for curiosity and the exploration of an idea are available, and too many obstructions are erected by teachers, then the motivation to engage in creative learning behaviour is easily extinguished. Therefore, to boost students' self-confidence and openness to the future, they need to be educated to be innovative as well as competent. These findings are also supported by Chell & Athayde (2009) who contend that 'creativity alone is not sufficient to foster innovation' (p. 14), and that self-efficacy and feelings of empowerment are essential motivators for long term social learning, social confidence and innovation.

An innovative and creative middle years learning environment reflects a curriculum which models, facilitates and enables adolescents, through processes of deliberative collaboration, to have the energy, motivation and commitment to better understand and be critical of the forces of change around them. However, the provision of such a learning environment can be challenging for many middle years teachers. The Queensland Ministerial Advisory Committee for Educational Renewal (MACER) (2004) argues that:

While communication skills, flexibility in thinking and emotional intelligence are increasingly seen as fundamental capability for living in a globalised world, the ideology of knowledge workers (teachers) who maintain tertiary education levels and voluntarily upgrade their stock of complex knowledge, impede the flow of flexibility, lifelong learning strategies, reflective and critical thinking, and dynamic knowledge (MACER, 2004, p. 14).

These challenges are still prevalent in the findings of current research by Ofsted (2010) indicating that

Pupils made little progress when the outcomes expected were insufficiently challenging and when they received insufficient guidance. Occasionally, teachers failed to grasp that creative learning was not simply a question of allowing pupils to follow their interests; careful planning was needed for enquiry, debate, speculation, experimentation, review and presentation to be productive (Ofsted, 2010, p. 7).

As outlined in, the then DEET (Department of Education Employment and Training, 2001) Discussion Paper on *Knowledge, Innovation, Skills and Creativity*, 'Education will need to help students develop the skills and knowledge for the knowledge economy, lay the foundations for lifelong learning and ensure they reach their full potential. Innovation and initiative are critical areas of skill for the future' (2001, p. 5). Research by Chell and Athayde (2009), Halsey, Lord and Jones (2006), Prosser (2006) asserts that teaching futures for the middle years also poses difficulties in cross-cultural contexts, wherein the knowledge style and forms of presentation are all open, but often not for negotiation, rendering them as inauthentic experiences. According to Brennan (2000) students need to become active agents of their own education, and be given individual responsibilities that require them to make and justify choices with consequences; in order to learn

the skills needed to navigate in a changing world.

Arguably, the learning and collaborative relationship and roles between teachers and students are being transformed to meet such outcomes. Research in creativity, innovation and creative thinking by theorists such as Chell & Athayde (2009), Hemlin, Allwood & Martin (2008), Hartley (2006), Starko (2004) and Craft (2003), finds that adaptability in a changing world continues to be important throughout each person's lifetime, whereas specific skills and knowledge become obsolete. Research by Ofsted (2010) and MACER (2004) acknowledges that schools and teachers need to be actively engaged in creativity, innovation, risk, autonomy and self-management through government promotion of:

- the motivation to promote new knowledge,
- the opportunity to engage actively in innovation,
- the skills for testing and assessing the validity of new knowledge,
- the means for transferring the validated innovations rapidly within their school and into other schools,
- careful planning to ensure prescribed curriculum content for each subject is covered within a broad and flexible framework so that key skills are developed, and
- whole-school commitment to developing and consistently using technology to enhance pupils' confidence and engagement.

While some government literature and research acknowledges the importance of knowledge, innovation, skills and creativity (National College for School Leadership, 2005; ConsultQLD, 2004; MACER, 2004), research by Ofsted (2010), Chell & Athayde (2009) show a movement forward into innovation, creativity and lifelong learning success. Chell & Athayde (2009) identify creativity, self-efficacy, energy, risk propensity and leadership as key generic innovation skills, and as ways

for students to develop more positive mindsets and attitudinal approaches to learning. In contrast, the Victorian Department of Education Employment and Training's (2001) discussion paper identifies creativity as a catering to personality traits and learning styles. The paper describes older style curriculum methods that are limited to isolated goals and targets, rather than being a dynamic, educative strategy. Statewide mandated curriculum such as the Victorian Curriculum and Assessment Authority's Victorian Essential Learning Standards (VCAA, 2005) and more recently AusVELS (VCAA, 2012) still offer a prescriptive method of education with an incomplete understanding about those pedagogic practices and new methods for assessing progress and attainment in creativity; or how to cater for creative learning within the constructs of traditional timetabling organized around curriculum.

Clearly, the curriculum standards which are made available to teachers influence the standard of explicit learning outcomes and the potential for authentic learning. It is also clear that the social context, including the classroom environment and personal situation of learners, is important in shaping creative learning. Therefore, it is also important to understand those interpretations of curriculum which teachers develop and practice to better understand the place for teaching and learning for creativity.

### **Significance of research and contribution to knowledge**

The research findings of Ofsted (2010) offer great insight to some schools in England that are enhancing their prescribed National Curriculum, where creative approaches to learning are progressively developed and assessed. Australian government initiatives, while supporting policies for improved learning qualities such as creative learning or innovation practices, do not explicitly deal with the notion of the type of learning environments which support schools to improve creative learning outcomes and student engagement in the middle years of schooling. To offer a deeper

insight into the support of creative pedagogies and their relevance to a middle years' context, one teacher's classroom practices were examined in this research study. This research investigated the teacher's and students' beliefs about the nature of learning teaching and how they affect, stimulate and lead to engagement by the students in learning outcomes in the middle years, through the development of new strategies and innovative practices. This study used a case study to generate new knowledge about the gap between policy and research, about the fate of innovation in a school and the impact of standards based curriculum on creative learning in a middle years classroom. In particular, this study reveals:

- The strategies and approaches a teacher uses to engage students in creative curriculum and the classroom environment necessary to support those changes.
- The elements of teaching and learning that could support creative learning within the constraints of a school system and standards based curriculum.

### **Research questions**

In examining classroom practice, this research focused on the following issues:

- What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?
- What methods of creative practices or strategies are identified or supported in a regular classroom?
- Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of an everyday classroom and curriculum conditions?
- What are the challenges faced by a teacher when introducing creative approaches to authentic learning, change and innovation into the classroom?

- Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?

An extended review of the relevant literature in Chapter 2 indicates the theoretical approaches to developing creative learning and understanding the context and place of creativity in schools. It discusses the idealized place of creative learning in current curriculum and how it could be applied as a strategy for developing high order thinking, relevant skills and modeling life-long learning for middle years students. Most importantly, the issues of democratic schooling and school restructuring are discussed in light of creative pedagogies and the values placed upon creative learning in and out of schools. This discussion will identify the potential challenges pertaining to educational equity and students' access to learning, the relationships of power between the teacher and student, all of which impact the choices made when developing curriculum for teaching and learning in the middle years. Finally, a review of recommended theoretical strategies for establishing a creative teaching and learning environment emphasises the validity of creativity pedagogies in powerfully engaging young adolescents in their present and life-long education. Chapter 3 describes the qualitative methodology of data collection and analysis which have been sourced from photographs, tapes conversations, case writing and interpretive case writing to provide a rich and comprehensive description of teaching and learning in one classroom. The qualitative methodology used is phenomenological, as this method enables the researcher to understand the teacher and students' perceptions of their classroom environment, and reveals the phenomena of experiences as they occur (Van der Mescht, 2004). Chapter 4 presents the research analysis and findings, with examples of how these findings were developed to inform a meta-analysis. The meta-analysis advances six main themes that are significant in understanding the context and applications of creative pedagogies in this middle years classroom. These analyses are applied in the final interpretive case in Chapter 5.

Chapter 5 presents the final theorised case - the interpretive case - and reveals the dilemmas a teacher faces when introducing pedagogic change to improve learning and student engagement. It also reveals the relationship between pedagogy which reflects innovative approaches in one middle years environment, and a school context bound by an accountability and standards based curriculum. The interpretive case is informed by an analysis of findings applied to the characteristics of creativity developed from the literature review, and then applied to the six points of meta-analysis which map and document the experiences of this one class over the period of the research. The interpretive case shows the influences upon the classroom participants being studied, including: time, flexibility and creative processes, and the school community including other teachers and parents. It also provides an insight into the relationship between the active participation of students, perceived creative thinking and possible creative learning outcomes which contributes to the body of the data collection. Finally, Chapter 6 summarises these results and attempts to inform the literature about the balance between perceptions and experience of curriculum, and the types of school culture and classroom environments needed to support them. It offers conclusions to the strategies and difficulties faced by teachers when attempting to change school culture to improve learning outcomes. This Chapter also discusses the implications of this study and area for future study.

## CHAPTER 2

### LITERATURE REVIEW

This literature review explores the theorised approaches for developing creative learning in the middle years, and understanding the possible place of creative practice in everyday classrooms. These approaches include defining the term creativity, the nature of creative practice in learning, as well as the major influences and constraints when developing creative learning in schools. A review of the strategies for establishing a creative teaching and learning environment highlights the validity of pedagogies for creativity in powerfully engaging young adolescents in their present and lifelong education. This discussion will feature the idealized place for creative learning in current curriculum and how it could be applied as a strategy for developing higher order thinking, relevant skills and modelling life-long learning for middle years students. While schools acknowledge the need for creativity in education (Bland, Brady & Carrington, 2009), it is not a consistent practice, thus making innovation and change in schools and everyday classrooms a struggle. This review will reveal the challenges pertaining to educational equity and students' access to learning, the relationships of power between the teacher and students, and the challenges of current curriculum practices in schools and accountable decision making. These are all elements which affect the choices for developing innovative practices such as creative learning in middle years classrooms.

Prominent in the literature are four main topics which contribute to understandings of creative pedagogies and reflect the five main research questions below:

- What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?
- What methods of creative practices or strategies are identified or supported in a regular

classroom?

- Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of an everyday classroom and curriculum conditions?
- What are the challenges faced by a teacher when introducing creative approaches to authentic learning or change and innovation into the classroom?
- Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?

The main topics reviewed in this literature review cover research pertaining to cognitive theory, curriculum and pedagogic theory and practice, sociology and social theory. The review is organised into four themes which parallel the concepts of the research questions previously outlined: defining creativity; creative learning; the teacher, student and power; and teaching for creativity.

The first theme reviews the definitions of creativity in education, and summarises the idealised characteristics of creativity for this research. These are later applied to the analysis of findings in Chapter 4 and the interpretive case in Chapter 5. The second theme of creative learning explores the context of pedagogies in schools; reflecting middle years curriculum issues, school restructuring, lifelong learning, the possible place of creativity and innovative pedagogies in everyday classrooms. The third theme will present a review of the significant findings related to emerging notions of pedagogic practice in the middle years. These include the distribution of power between the teacher and student and effects on creative practice in the classroom, in light of current curriculum practices and their capacity to engage students. Moreover, this theme reveals the values placed on creativity from social, economic and technological perspectives which influence the ways creativity is used in schools, by whom and for whom, and how these values affect the

implementation of pedagogic change in classroom practice.

The final theme reflects on the underlying issues of previously described topics, drawing attention to how they can be interpreted when applying creative pedagogic strategies. Specifically, there is an emphasis on two findings. First, the literature reveals strategies for understanding and developing those classroom environments and school priorities which could support teaching and learning through creative pedagogies and assessment of creative learning. Secondly, the literature explores approaches to assessment and curriculum planning for creative learning outcomes.

### **Creativity**

This first theme of the literature review sets out to explore the socio-cultural and economic contexts and education issues which reflect the need for schools to develop creative learning pedagogies. It defines the characteristics of creativity in education, followed by an examination of the relationship between these theories of creativity and the approaches to creative practices based on social and cognitive theory. These understandings will reveal the theoretical characteristics of creativity which influence student learning, thinking and engagement in the middle years. A review of the literature results in a summary of idealised characteristics of creativity which will be applied to this research. This theoretical summary will identify and demonstrate the presence of creative learning strategies which could possibly be supported in a standards based curriculum. This section about creativity explores the following concepts and practices:

- context for creativity in the classroom;
- characteristics of creativity;
- a systemic approach to creativity;
- creativity: process versus product;
- approaches to creative problem solving;

- the place of creative learning in a standards based curriculum; and
- finally, the characteristics of creativity for this research.

### *Context for creative learning in the classroom*

There has been great evidence, emerging from education systems in western societies since the end of the 1990s, in developing creativity in response to the problems of improving competition in the globalised market economically, socially and technologically (Beane, 2001; Caine & Caine, 1997; Calfe & Hiebert, 1991). Academic research in education reveals that the promotion of creativity in the school curriculum propels students to make improved choices for the future. It is suggested by Chell & Athayde (2009), Suda (2006) and National Middle School Association (2006) that, through increased capacity to be flexible and to be innovative, an individual will generate the skills claimed to be necessary for economic and societal survival. Chell & Athayde (2009) indicate that these skills need to have a measure of accountability so as to identify their currency in education and encourage a culture that helps innovative education to flourish. Research by UK Ofsted (2010) and Hemlin, Allwood & Martin (2008) shows that successful curriculum initiatives taught alongside creative approaches to learning encourages students to be divergent thinkers who can reflect on their learning, understandings, inquire, hypothesise and apply their learning.

In education, the middle years of schooling have been identified as having special characteristics in terms of student development, behaviour and learning needs (Bland, Carrington & Brady 2009; O'Rourke & Dalmau 2002). The issue of middle years learning has also arisen from the demands of a rapidly changing globalised society, particularly in those approaches pertaining to engagement and learning experiences (Hipkins, 2011; Hartley, 2006; Prosser, 2006). Other theorists address critical literacies (Luke et al., 2003), complex thinking and problem solving (Starko, 2004; Yashin-Shaw, 2001) which relate to the initiatives of current governments for enhancing students' learning

during the middle years (Years 5-9). Calls for developing these pedagogic characteristics have also been influenced by a system constrained by dominant educational stereotypes and misunderstandings of the role and identity of 10-15 year old students and their subcultures (Ministerial Council on Education, Employment, Training and Youth Affairs, MCEETYA, 2008; Beane, 2005; ConsultQLD, 2004; O'Rourke & Dalmau, 2002).

For students in the middle years, education should have immediate intrinsic value and relevance to their lives, and not just present long term promises for future employment or studies (Bland, Carrington & Brady, 2009; Prosser, 2006). Students need to know how and when to perform and how to change their performance intellectually, socially and emotionally to fit new and different contexts. Such understanding and metacognition are not only necessary for participating in economic or intellectual futures, but for building responsible democratic communities, relationships and personal independence, as the world of the middle years student evolves from the influences of mass-media, telecommunications and multi-media (Chell & Athayde, 2009; MCEETYA, 2008).

In a society and an economy which demand technological proficiency, there is a shift towards an information and innovation focus for education. For students in the middle years, technology is not just a tool; it is a way of life where they are connected with their world and their peers through the language and social networks they create. While schools need to impart the desire and pleasure of learning, the ability to learn, how to learn and intellectual curiosity within such a framework (MACER, 2004; Manning & Ryan, 2004; Craft, 2003; Bresler, 2002), it is through teaching for problem solving and problem finding, that teachers can achieve this goal. Starko (2004) and Newmann and Whelage (1995) suggest that school teachers need to practice a pedagogy that focuses on problem-centered learning rather than student-centered or prescribed curriculum-centered learning to achieve the described authentic learning outcomes.

Approaches to achieving problem-centered learning are suggested by Craft (2003, 2002) who contends that life wide creativity, the creative practice applied to the breadth of contexts in everyday life, enables the agency of individuals to be applied to the responsiveness and innovations required to adapt to a rapidly developing society. According to Starko (2004), it is problem finding, in its broadest sense, which underlies all types of creativity. The literature also discusses the type of pedagogy where participants create, enact and experience purposes (Hemlin, Allwood & Martin, 2008). These practices involve learning values, expectations, knowledge and ways of knowing, rules of discourse, roles and relationships, resources, artifacts, physical arrangements and boundaries of the pedagogic setting both together and separately (Suda, 2006; Durbach, 2004; Zyngier & Brunner 2002). Chell & Athayde (2009) argue that 'to become future innovators, young people need an initial set of skills and attributes that are clearly linked to the innovation process...innovation is a collaborative activity: whilst one individual may initiate the idea, few can go it alone' (2009, p. 13). It is these approaches to creativity and learning which are explored in this research, to offer possible strategies which support students' and teachers' practices in the middle years.

### *Characteristics of creativity*

Creativity is diverse in its context and it is difficult to report one common definition. The difficulty in presenting a single definition parallels the variation in the range of values schools and teachers' exhibit when understanding, interpreting and implementing creativity in education. Gallop (2002) describes creativity as an:

Imaginative activity [which] is the process of generating something original: providing an alternative to the expected, the convention or the routine. Imaginative activity is a form of mental play - serious play directed towards some creative purpose. It is a mode of thought that is essentially generative: in which we attempt to expand the possibilities of a given situation; to look afresh or from a new perspective, envisaging alternatives to the routine or expected in any task (Gallop, 2002, p. 3).

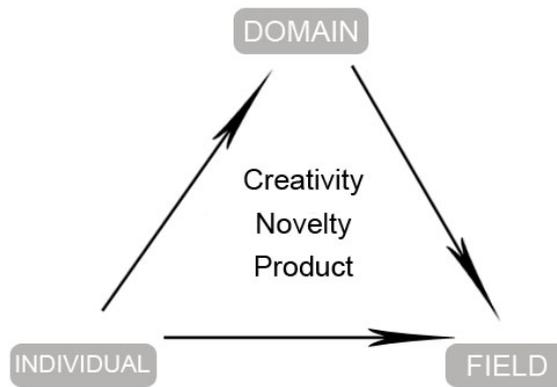
Creativity is not an objective realisation. What is judged as creative is due to the interaction between a person and that environment (Csikszentmihalyi, 2008; Craft, 2003; Auh, 2000; Sternberg, 1996). Robinson and Aronica (2009) contend that creativity can be thought of as applied imagination, and present creativity as the key example of the dynamic nature of intelligence. Paradoxically, a student can be creative and demonstrate creativity but not produce anything novel, effective and ethical. However, Starko (2004) asserts that 'to be considered creative, a product or idea must be original or novel to the individual creator,' (2004, p. 6) not only particular to the evaluation of the participants in that environment or the experts within that field. Sternberg (1996) identifies types of creative thinking, such as synthetic thinking which is the ability to make connections and generate novelties that other people do not recognize spontaneously (1996, p. 3). This type of thinking can be seen in Anderson and Krathwohl's (2001) revised Bloom's Taxonomy Sub Categories where creativity has been added to the top of the Higher Order Thinking Skills (HOTS). Anderson and Krathwohl (2001) believe creativity to be higher within the cognitive domain than evaluation (Churches, 2008; Anderson & Krathwohl et al., 2001). Craft (2001) describes this as 'high creativity', the sort of publicly acclaimed creativity which changes knowledge and/or our perspective on the world (2001, p. 13).

Another position on creativity is that it can be applied to more than one context and is therefore not limited to traditional domains of creativity in school or in the arts (Craft, 2001). Robinson (2009) states that 'discovering the Element [creative potential] is all about allowing yourself access to all the ways in which you experience the world and discovering where your own true strengths lie' (2009, p. 51). It is apparent that creativity is more than an artistic or aesthetic phenomenon, and can be applied to sports, business and manufacturing, mathematics and the natural sciences. Thus, it is conceptualized in different ways, making a single definition difficult.

### *A systemic approach to creativity*

A systemic approach to understanding the social systems, within which the creative act occurs, sets the focus of analysis for this research. Figure 1 (p. 27) is an interpretation presented as a triangulation of Csikszentmihalyi's systemic theory of creativity. Csikszentmihalyi (2008, 1996) describes creativity as a systemic phenomenon, describing the product and process of the 'interaction between a person's thoughts and a socio-cultural context' (1996, p. 23). As illustrated in Figure 1 (p. 27), *creativity* results from the interaction within this system, composed of three elements: a culture (*domain*) that contains symbolic rules, an *individual* who brings novelty into the symbolic domain, and *field* of experts who recognize and validate the innovation.

The literature of Csikszentmihalyi (2008, 1996), Craft (2001) and Amabile (1990) indicate that all three elements are necessary for creative ideas, product or discovery to take place. The domain is the culture, which influences the creativity and potential of learners, both within and external to the school environment. The domain has set symbolic rules and structures, which for students are accessed via the teacher ('field' in Figure 1) curriculum and learning environments. The domain directly affects the field, which in a school context reflects teachers acting as gatekeepers to the domain, which is defined as society, future employment and government education requirements and expectations and those of parents and local communities. Very often, the role of the field is reactive to and pro-active about the requisites of the domain that in turn can narrow, broaden or filter the selection of novelty to be created and developed (Csikszentmihalyi, 2008). The individual (learner or creator) uses the symbols of the domain to create. The individual learns the rules and the content of the domain, as well as the criteria of selection and the preferences of the field.



**Figure 1: Systemic approach to creativity, an interpretation from Csikszentmihalyi 1996, p. 27)**

According to Csikszentmihalyi (2008, 1996) the potential for creativity is influenced by interest in and access to the domain and field, level of convergent and divergent thinking ability and the complexity of processes involved. The central novelty or product of creativity can result in the production of abstract concepts; plans, strategies and systems; physical structures; music and arts and so on. Such creativity is effectual, thereby achieving an end product, which is wholly valued and acknowledged subjectively and objectively by both the creator and external actors (domain and field) (Csikszentmihalyi, 2008; Bresler, 2002). In this instance the personal traits of creativity are not what determine whether or not a person is creative. Rather, what counts is whether the field of experts in the cultural domain accepts the novelty produced. In the context of schools, the contrast of Starko's earlier assertion of creative novelty having relevance for the creator, and Csikszentmihalyi's notion that creativity is determined by the domain, pose questions for schools and teachers regarding power, accountability, professional knowledge and acceptance or acknowledgment for creative learning and practices. While it appears that many of the arguments found in literature present arguments that represent creativity as highly cognitive and individualistic, this research seeks to explore if, in an everyday education environment, creative

learning is a possible way to promote students' engagement and stimulus for thinking and learning both individually and collaboratively.

*Creativity: process versus product*

There is consensus among theorists that creativity is too often determined by its product, indicating that there is too much interest in the result, rather than focusing on the intricacies of development, effort and deliberate choice that precede end products (Starko, 2004; Bresler, 2002). Creativity can be also be identified by processes relating to its cause and as an interaction. The causality of the process is acquired through the application of experiences and psychological factors via the creator's ability, knowledge, skills, motivations, values, flexibility, intellect, courage and openness. The interactive nature of creativity relates to the creator's exposure to the environment. Research by Csikszentmihalyi (2008), Richards (2007) and Mitchell (2003) contend that this environment encompasses:

- creator's psychological factors;
- creator's interaction with the field (as described in Csikszentmihalyi 1996, pp. 27, 100);
- collaborative dialogues and interactions;
- 'resisters' or circumstances and people inhibiting the process, choice and freedom to experiment;
- environment of tolerance, undue time pressure, competition, appropriate modelling, encouragement and recognition during the process of creative production; and
- evaluative expectations.

It is important for pedagogy to reflect these elements of creativity, both process and product, particularly if students are to authentically practice, develop and learn to seek and solve problems now and for the future (Dimarco, 2009; MCEETYA, 2008). It is also important for teachers to

develop a classroom environment supportive of creative processes so that students feel safe to share ideas, problem seek and experiment. None of the existing definitions of creativity is immune from the problem of defining creativity as a product. Additionally, the process of interactivity required for creative thinking may be limited by a curriculum that is too varied, as a creative learner may not be able to express creativity with equal ease and effectiveness in all areas consistently. This causes a problem for teachers who largely assess the product of learning. Research by Ofsted (2010) and Hemlin, Allwood, & Martin (2008) has shown that successful application of creative learning to curriculum is multidisciplinary with cross curricular approaches. They encourage a flexible use of time, allowing for detailed exploration of a topic and providing continuity of learning. Here, motivation and construction of learning is still engaging even within a standards based curriculum, as the approach to developing the teaching and learning practices are not compartmentalised into one domain or thinking outcome, and are focused on the process of problem solving and seeking.

#### *Approaches to creative problem solving*

Csikszentmihalyi (2008), Hartley (2006) and Bresler (2002) argue that although the results of creativity enrich and indirectly improve the quality of life within the culture, one may also learn from this knowledge and make life more interesting and productive through applying creative problem solving. Research by Yashin-Shaw (2001) focuses on a 'controlled laboratory conditions' approach to protocols utilised in creative problem solving. A tool has been developed for 'navigating poorly structured problems for 'freeing' the practitioner to encourage students to use cognitive resources interactively and iteratively rather than linearly to increase the quality of the output' (Yashin-Shaw, 2001, p. 271). A developed understanding of Yashin-Shaw's model for teachers could provide approaches to planning or teaching for creative problem solving. This theory is supportive of the findings by Ofsted (2010) regarding cross curriculum creative learning experiences. Thus it appears that creative learning needs to follow a curriculum which is not

sequential nor based on stage-like models to enhance a middle years student's journey of creative thinking; supporting the idea that the value of learning be primarily focused on the process of learning.

O'Rourke & Dalmau (2002) present a social ecology perspective to education which supports Yashin-Shaw's model. They recognize that the 'middle years student needs a responsive approach to pedagogy, rather than specific frameworks or models' (2000, p. 6), such as the approaches by Ofsted (2010, p. 9) for integrating national curriculum into planning for creative learning. Both the positions of O'Rourke & Dalmau and of Yashin-Shaw show that it is significant that the evaluative processes teachers use for assessment should focus on the entire process of learning and that activities should not be 'locked into one specific schema for creative problem solving' (Yashin-Shaw 2001, p. 57).

#### *The place of creative learning in a standards based curriculum*

The literature proposes several approaches to curriculum methods, innovative practice and learning styles which suggest the possible place for teaching and learning for creative learning in standards based curriculum, to improve engagement, thinking skills and overall learning outcomes. Previous discussions by Ofsted (2010), Churches (Bloom's Revised Taxonomy) (2008), Hemlin, Allwood, & Martin (2008), O'Rourke & Dalmau (2002), Yashin-Shaw (2001) present strategies for a pedagogy which is flexible, dynamic, responsive, problem seeking and solving and inter curricular. However some school curriculum methods are still founded on constructivist approaches, as discussed in the literature for metacognitive thinking from the late 1980s by Biggs (1988) and Haller, Child, and Walberg (1988). Research in the 1990s by Sternberg (1998) and Hattie, Biggs, Purdie (1996) argue that students' knowledge was considered to occur in progressive developmental stages and did not appear to be applicable to creative learning. In such an approach, while students are actively

engaged in complex activities in a specific subject (Starko, 2004; Caine & Caine, 1997), it does not allow the flexibility required for higher order thinking described by Ofsted (2010) such as thinking divergently, reflecting on findings, posing questions, hypothesising and applying learning, or as described in Csikszentmihalyi's (2008) triangulation of creativity in Figure 1 (p. 27).

A cognitive approach to creativity can involve the use of thinking tools or techniques to assist students in generating original ideas (Starko, 2004). While many of these tools are specifically designed for business purposes to develop new products and maintain a competitive edge, Starko (2004) finds that the use of thinking tools as a sole method of stimulating or practising creativity, can take the control and creativity away from the learner. Starko (2004) concludes that in the development of creativity, 'having tools, however, is not always sufficient' (Starko 2004, p. 178). He continues to explain that these thinking tools have relevance when the context and applications are similarly relevant to the cultural contexts of students' lives:

...it is necessary to provide multiple vehicles or strategies to appeal not just to students' varied abilities or learning styles, but also to their diverse social and cultural values. This varied sense of appropriateness perhaps makes defining creativity more complicated, but it also allows richness and diversity in the types of creative efforts that are attempted and appreciated (Starko, 2004, p. 7).

There is evidence that many of these strategies described can be effective in assisting both children and adults in producing novel ideas. Some of the techniques reflect cognitive processes underlying creativity, in turn developing attitudes or habits of mind that facilitate creativity, such as independence in judgement, willingness to explore multiple options, and persistence beyond the first idea (Starko, 2004). However, the use of tools still does not explain or demonstrate how approaches to higher order thinking and problem finding will take into account interactivity, flexibility and the time required for these learning processes in everyday classrooms bound by standards based curriculum.

Craft (2001) asserts that due to the various types of strategies, programs and thinking tools developed to encourage and facilitate problem solving skills, 'there is rarely a transfer to more complex activities such as creative production' (2001, p. 16). Though this may be apparent, there is still a place for the teaching of thinking strategies in developing creative processes which are necessary for lifelong creative skills. Craft (2001) acknowledges that some pedagogic strategies may develop greater creativity than others. She gives, as an example, Montessori education which supports educational practice to 'help children develop creativity, problem solving, social, and time-management skills, to contribute to society and the environment, and to become fulfilled persons in their particular time and place on Earth' (2001, p. 16). This model focuses on 'success-oriented and self-correcting, hands-on manipulatives to accommodate the holistic nature of the child, including physical, mental, and moral aspects' (Fogarty, 2007, <http://www.robinfogarty.com>). The basis of Montessori practice in the classroom is respected individual choice of research and work, and uninterrupted concentration rather than group lessons facilitated by an adult (Montessori, 1998-2012, <http://www.montessori.edu/>). This method largely seeks learning in a less technologically dominated world and focuses on respect by the internal, individual nature of the learner (Montessori, 1998 - 2012, <http://www.montessori.edu/>; Craft, 2001; Fogarty, 2007, <http://www.robinfogarty.com>).

Craft (2001) groups current dominant approaches to creative thinking and learning into 'creative cycle, single strategy, multi strategy and system approaches' (2001, p. 19). Included in these groupings are similar approaches advanced by Starko (2004), Cropley (2001) and Choo (2000):

- 'Creative cycle' approaches describe the stages of creativity as preparation, incubation, inspiration and verification; or Divergent Thinking strategies such as Guilford's Structure of Intellect (SOI) model: fluency (thinking of many ideas), flexibility (thinking of

different categories or points of view), originality (thinking of unusual ideas), and elaboration (adding detail to improve ideas) (also in Starko 2004).

- 'Single-strategy' approaches, such as de Bono's Six Thinking Hats method (de Bono 1992), lateral thinking, Craft's 'possibility thinking', Robin Fogarty's activities in the Thinking Curriculum (Plus Minus Delta, Y-charts, etcetera) (Fogarty, 2007, <http://www.robinfogarty.com>; VCAA, 2005, <http://www.vcaa.vic.edu.au>).
- 'Multi-strategy' approaches include those significant for the pedagogic approaches to creativity such as the restructuring of time, and flexibility, in teacher intervention and classroom environment (Craft, 2001). Another approach is Torrance's and Safter's 1999, Incubation Model which provides students with experiences encouraging them to identify problems or gaps in knowledge, and to think about them in new ways, and to take time for incubation to occur.
- 'System' approaches include those which modify the classroom environment, such as the Reggio Emilia (2003) approach (<http://www.reggioinspired.com>). Though focused on early childhood, relevant strategies to middle years include a focus on time to complete tasks, space; rich resource materials also selected by students, a student represented classroom environment, experimental environment, field trips and artifact presentations (Craft, 2001).

While the literature provides many conceptions of authentic learning, including constructivist, progressive, productive and critical pedagogies (Dimarco, 2009; Prosser, 2006; Beane, 2005; Luke et al, 2003; O'Rourke & Dalmau, 2002), there is little explicit discussion of its relation to the notion of teaching and learning for creativity nor its application to schools bound by accountability and standards based curriculum. Chell & Athayde (2009) argue that 'regardless of subject discipline, a problem solving, curiosity-driven approach helps develop creativity. When students work together

on projects, they are developing the teamwork skills needed in the workplace' (2009, p. 3). This research has resulted in a project called The Tool, which is focused on innovation as the key driver to success. Their research states, 'The Youth Innovation Skills Measurement Tool aims to address a gap in educational assessment by offering a robust measure of young people's innovation skills' (Chell & Athayde, 2009, p. 17). They find that creativity is a component of this approach, but innovation is the primary key as it is the ability to generate an innovative idea that comes first in this process. Then, the skills of imagination and creativity develop it. They conclude that

Imagination means the ability to envision the development of the idea into the future. Creativity subsumes imagination and adds an ability to connect ideas, to tackle and solve problems, and curiosity.

What is important in our work is to capture a mind-set and attitudinal approach rather than a set of personality traits (2009, p. 14).

Of the many strategies aimed at developing creative thinking and learning, those most efficient are dependent on the theory of creativity behind the pedagogic practice. Significant findings in the research by Ofsted (2010) indicate that in 'curriculum planning, teachers need to balance opportunities for creative ways of learning with secure coverage of National Curriculum subjects and skills' (2010, p.7). They discuss that:

In schools with good teaching, there is not a conflict between the National Curriculum, national standards in core subjects and creative approaches to learning. In the schools which were visited for this survey, careful planning had ensured that the prescribed curriculum content for each subject was covered within a broad and flexible framework and key skills were developed. These examples were accompanied by better than average achievement and standards or a marked upward trend (2010, p. 5).

One such finding from Ofsted (2010) is that, occasionally, teachers failed to grasp what creative learning means, thus impacting the flexibility and planning required for meeting those outcomes for creative learning.

It appears that a common understanding, at the teacher and school level, of what creativity means,

and how it will function alongside curriculum, is important for its successful implementation. Thus, the many viewpoints on creativity, established in the literature signify that the ways creative strategies and practices are viewed and interpreted will influence its many applications to curriculum. The terms create or creativity has been used in curriculum documents in many ways: 'Create a...' replaces 'Make a...' or 'Compose a...' such as in New Basics Rich Tasks, Education Queensland (2000) and Burke (1997). The curriculum approaches used in New Basics referred to creativity as 'an essential learning component of thinking, linking it to wisdom and enterprise, the capacity to contribute to shape ideas and solutions' (Education Queensland, 2000, p. 278). Ofsted (2010) assert that 'creativity is more than allowing pupils to follow their interests, careful planning was needed for enquiry, debate, speculation, experimentation, review and presentation to be productive' (2010, p. 6).

The state-wide mandated curriculum in Victoria, including AusVELS (2012), the Victorian version of the Australian curriculum separate 'creativity' as an explicitly listed dimension of the domain *Thinking Processes* and *ICT for creating* as a strand of Inter-Disciplinary Learning. It also features a domain called *Design, Creativity and Technology* encompassing *investigating and designing, producing, and analysing and evaluating*. Teachers are required to teach the domain outcomes of creativity, but it is not about the processes which involve creative learning as discussed in the literature, it is about products and outcomes and skills. While the curriculum is less organised by a subject approach, it seems that creativity is subject specific, rather than as a flexible or responsive approach for teaching and learning across the curriculum as previously discussed by O'Rourke and Dalmau (2002). It seems, the elements of the processes of learning, and the interactivity of higher order and creative thinking are overlooked as described by Bloom's Revised Taxonomy (Churches 2008) and Starko (2004). Yet, as shown by the current research of Ofsted (2010), teachers can 'balance opportunities for creative ways of learning with secure coverage of National Curriculum

[in England] subjects and skills' (2010, p. 7); indicating that creative pedagogies could be supported in everyday middle years classrooms that practice Australian curriculum.

### *Characteristics of creativity for this research*

With regard to the theories explored thus far, creativity can be identified as an act, idea or product that changes an existing domain or transforms into a new one. As established in the literature, creativity is not exclusive learning, and can be stimulated by the use of thinking tools or multi strategy approaches, both collaboratively and individually. Creativity and the processes of innovation for higher order thinking are valuable and motivating skills to develop middle years learning environments. The themes and definitions discussed are characterized into elements that define a theoretical understanding of creativity for this research as shown in Table 1. These elements present an idealised notion of what is defined by the literature as theoretical approaches to creative pedagogy. However, while these approaches can inform teacher practice, it is not a practical model on which to base pedagogic or curriculum reform, as it is not inclusive of school contexts and cultures. Table 1 indicates the seven main characteristics of creativity as identified in the literature, how they are defined and examples of how they can be applied to classroom practice.

**Table 1: A summative model of definitions of creativity**

Characteristic	General description	Application to classroom practice
<b>Self-Identity and Autonomy</b>	Learner requires high self-esteem, self-sufficiency, and passion for autonomy (Bresler, 2002).	<ul style="list-style-type: none"> <li>• Autonomy is motivated by making decisions related to one’s career.</li> <li>• Questions to develop self-conceptualizing:               <ol style="list-style-type: none"> <li>1. Who am I?</li> <li>2. What do I believe in and value?</li> <li>3. What do I want to get out of life?</li> <li>4. What are my strengths and weaknesses?</li> </ol> </li> <li>• How capable a person am I?</li> <li>• Provide collaborative experiences, reflecting on perceived reactions of others, peers and teachers (Csikszentmihalyi, 2008, 1996; Runco, 1990).</li> </ul>
<b>Non-Conformity</b>	Viewed from a non-stereotyped perspective of artistic/ literary/ dramatic/ musical contexts. A commonality between excitability, non-conformity, risk taking and creativity is motivational, reducing fear of self-embarrassment (Starko, 2004; Yair, 2000).	Learning and behaving in non-conformist ways is applicable to all areas of the curriculum. Simultaneously with other characteristics of creativity, it could promote making remote associations thus developing thinking skills which lead to production of novelty (Csikszentmihalyi, 2008, 1990; Cropley, 2001; Amabile in Runco, 1990).
<b>Flexibility</b>	Learning is a continuous process catering to abilities, cognitive styles, motivational levels and circumstances. Learners must be willing to revert to beginner status, both cognitively and socially by recognizing inadequacies in what they know and what they can do (Chell & Athayde, 2009; Halsey, 2006).	<ul style="list-style-type: none"> <li>• Curriculum must avoid being restricted by accumulated knowledge and constructivist approaches to learning.</li> <li>• Learners and teachers need to be accommodating to new knowledge and innovation by remaining open to novelty and challenging ideas, individually and collaboratively.</li> <li>• Students work collaboratively without a fear of losing face.</li> <li>• Flexibility is learned through processes of elaboration and developing and extending ideas to achieve higher order thinking (Hemlin, Allwood &amp; Martin, 2008; Halsey, 2006; Cormack 1998; Amabile, 1990).</li> </ul>

<b>Effectiveness and Relevance</b>	This element is often determined by the school and government curriculum standards. It is a specific physical and abstract product like memory for factual knowledge, problems, technical proficiency, and special talents. Products show relevance, offering solutions judged as effective and meaningful (Lingard, 2010; Ofsted, 2010).	<ul style="list-style-type: none"> <li>• To motivate learning, both student and teacher need to identify whether the product and processes of creativity achieve effectiveness and relevance.</li> <li>• Learning reflects personal concerns, societal and cultural knowledge (Yashin –Shaw, 2001; Csikszentmihalyi, 1996; Getzels, 1991).</li> </ul>
<b>Originality</b>	Learners are engaged in creative thinking, resulting in original solutions to problems that continually arise in personal and vocational spheres. Learning involves generating solutions and alternatives that productive, valuable and worthwhile (Richards, 2007; Hartely 2006).	<p>Assessment of originality can be unpredictable against conventional methods due to uncommonness of answers produced. An effective assessment method is during the creative process, by maintaining sensitivity to the problems encountered:</p> <ul style="list-style-type: none"> <li>• What is it?</li> <li>• How do I go about it?</li> <li>• When is it finished?</li> </ul> <p>(Richards, 2007; Starko, 2004; Sternberg, 2003).</p>
<b>Elegance of Problem Solving</b>	A process of problem solving original products/novelty such as responses, ideas, solutions or actual products all of high quality, that is productive, valuable, worthwhile (Csikszentmihalyi, 2008; Milgram, 1990).	The creator is involved in making connections and seeing or being involved in developing those relationships. It is inclusive, but not exclusive to the notion that it is entirely dependent on knowledge or traditional expressions of intelligence (Chell & Athayde 2009; Richards, 2007; Milgram, 1990).
<b>Risk Taking</b>	When a lack of available opportunities for curiosity, and engagement of risk and exploration is obstructed, then motivation to engage in creative behaviour is easily extinguished. Risk taking is affected by constraints of time and flexibility. Risk taking involves knowing that the outcome may not always be certain (Sawyer, 2003; Cropley, 2001; Covington, 1998).	<ul style="list-style-type: none"> <li>• Students are more likely to take risks when learning is intrinsically interesting, enjoyable or satisfying.</li> <li>• Extrinsic motivations such as expected evaluation strictly regimented educational methods, surveillance, competition, reward, restricted choice and deadline can hinder risk taking.</li> <li>• Learning has to stimulate curiosity, which is the element of uncertainty or novelty, generating conceptual conflict, motivating specific explorations designed to resolve conflict. Asking questions of '<i>What if?</i>' can stimulate this.</li> <li>• Collaborative learning enables students to experience humility by risk taking, developing self-image and confidence (Starko 2004; Amabile 1990).</li> </ul>

## **Creative learning**

The literature covers a range of themes which reflect the need for pedagogic change in education, and have resulted in research for creative pedagogies and learning as summarised in Table 1. First, this discussion will briefly readdress the context for pedagogic innovation in classrooms and how schools are attempting to address societal requirements for new types of knowledge and skills; particularly for students in the middle years. The remaining issues of this section include school restructuring; creative learning and learning to make choices; and creativity for democratic schooling.

### *The context for pedagogic innovation*

This section will briefly review the context for pedagogic innovation in classrooms, and explore the impact of current social values of knowledge on school curriculum and how these issues for reform, reflect teaching practice and student learning in the middle years. As discussed earlier in this Chapter, research over the last decade indicates a 'new age economy' or 'knowledge economy,' where the value of knowledge has increased dramatically (Chell & Athayde, 2009; Prosser, 2006; Cuttance, Angus, Crowther & Hill, 2001). Knowledge is a product that has clear economic value. Schools need to meet these emerging social and cultural trends which have changed the values, needs, standards and education for the workplace, community and beyond. Delors (1996) contends that:

Education is at the heart of both personal and community development; its mission is to enable each of us, without exception, to develop all our talents to the full and to realize our creative potential, including responsibility for our own lives and achievement of our personal aims (Delors, 1996, p. 17).

DEET (2001) concurs, indicating students need to develop the skills to accept differences and deal with others respectfully as the cultural make up of our community diversifies, all while our access to global industries and communities via technologies. The educational goals of MCEETYA (2008) are founded on the notion that 'all young Australians should become successful learners, confident

and creative individuals, and active and informed citizens, through collaboration between government and all school sectors, including the community' (2008, p. 8).

Clearly one role of school curriculum is to introduce middle school learners to the idea that lifelong learning is important for their ability to adapt to the changes in a knowledge and technology based society. In Australia, since the mid-1990s, the middle years of schooling (students aged 10-15) has had extensive research as outlined by Brennan, *A new generation of high schools for the ACT* (2000), Barratt in *Shaping Middle Schooling In Australia: A Report of the National Middle Schooling Project* (1998), Cormack, Johnson, Peters & Williams in *Authentic Assessment: A report on Classroom Research and Practice in the Middle Years* (1998), Cumming in *Middle Schooling for the Twenty-first Century* (1993), and NBEETSC *The Compulsory Years: Schooling for Young Adolescents In the Middle*, (1993). The findings from these researchers describe middle schooling as a 'phase of schooling that bridges the conventional primary or secondary divide with a view to responding more effectively to the specific needs of young adolescents' (Barratt, 1998, p. 1).

Students in this age group uniquely experience various personal, emotional, physical, intellectual, social, political and economic factors, which have a significant impact on their ability to establish a sense of self-identity and place in the world currently and in the future (Barratt, 1998). Brennan (2000) asserts that 'the role for schooling in helping young people build a capacity to engage in further education and training is thus essential for their future prospects' (2000, p. 9). Hartley (2006) argues that:

...where choices are present, young people tend not to want to work in factories or on farms. In short, very many of the coming billions of young people will want to work with knowledge, culture and creativity, in jobs that draw on their individuality and imagination (2006, p. 3).

Middle years students also need to grow toward independence for lifelong learning, through gaining

experience in decision making, and being accountable for those processes. Research by Ofsted (2010, p. 11) found that the most successful secondary schools provided many opportunities for individual enquiry, speculation, construction and evaluation. These processes involve students thinking more abstractly and reflectively. At this age, students are also dealing with sexual identity, acceptance and support of peers, gender relations, and establishing role model relationships with adults (MACER, 2004; DEET, 2001). It is clear that schools must meet the new economic and technological demands for developing students' skills and knowledge for lifelong learning and economic success; in light of students' personal needs in the middle years of schooling, teachers need to create a learning environment which will support learning and address all of these requirements in the face of school restructuring and accountability and curriculum innovation to meet these outcomes.

### *School restructuring*

Most recent school restructuring initiatives such as those described by Lingard (2010) and Hemlin, Allen & Martin (2008) suppose a radical reordering of how schools are organised, governed and the re-conceptualization of understandings of the ways that students learn. This process influences school culture, equity and pedagogy, learning outcomes, assessment and performance measures and the possible concern of education as a commodity. Lingard (2010) argues that 'global policy convergence in schooling has seen the economisation of schooling policy, the emergence of human capital and productivity rationales as meta-policy in education, and new accountabilities, including high-stakes testing and policy' (2010:136). Riddell (2001) and Smyth & Shacklock (1998) concur, indicating that education is moving from a public state run activity, to being a privatized activity for profit, where the 'current emphasis on gaining the competitive edge on one's peers at school, in order to secure a place at university and or the job market, tends to ignore the common good altogether' (Riddell in Riddell 2001, p. 79).

Providing a market for education promotes competition that increases the variety of education pedagogies, systems and resources available to teacher, student and parents alike (Prosser, 2006; Finn, 1990 in Olssen, 2004). There also seems to be a high focus for schools (via government commitment and policy) to disclose their performance, including national testing results, publicly to parents. Riddell (2001) labels this as anti-democratic, while Leach & Moon (1999, p. 266) and Logan (1997, p. 81), find this 'massification' of education is affecting student retention indicating that the choices are not made by students directly, and contribute to social and later economic alienation. Brennan (2000) suggests that

the high school years cannot afford to be a place for stratifying students into those likely to leave early, since the jobs are not there for them, and the consequences of not being able to make the transition into further education have dire consequences for lifelong employment participation; particularly as many jobs during their lifetime have not been invented yet (2000, p. 7).

It seems that those teaching strategies particular to middle years which attempt to ease the transition of students, are controlled by school based economic rationalisation, resulting in pedagogy which is scripted to meet testing outcomes with little room to explore educational opportunities for students. Clearly these issues would affect the implementation of innovative practices or creative learning in schools as the academic outcomes of Year 7 programs would need to be measured to reflect the monetary return of enrolments. O'Rourke and Dalmau (2002) contend that 'although structural reforms can lead to improvements in students' behaviour and sense of socio-emotional well-being, they do not by themselves lead to improvements in academic achievements' (2002, p. 26). Lingard (2010) and Dimarco (2009) argue that while school reforms are geared towards creating intellectually engaging pedagogies, the use of national testing affects teacher professionalism, thus limiting the potential of quality interactions in the classroom. Lingard (2010) contends that to improve academic achievements, the quality of teacher classroom practices needs to improve, not just the regime of policy. While Lingard (2010) argues that education policy has become

economised, it is clear that the intentions for middle years policy in schools highlight the misuse of institutional and economic interests. For example, Lingard (2010), Dimarco (2009), Rothman (2003) argue that the major initiatives in the current generation of middle years pedagogy fail to:

- Address disadvantage and promote social equity as a whole school issue, rather than a matter of individual deficit.
- Alleviate impacts of poverty and disadvantage on academic and achievement of student outcomes.
- Increase teacher involvement in efforts for middle school reform.
- Reduce the restrictiveness of standards based curriculum within key learning areas to improve learning outcomes.

These findings support the research of Halsey, Lord & Jones (2006); Prosser (2006); Olssen (2004); Hough and Paine (1997) who all contend that over the period of the 1990s the lack of total success of the implementation of middle years pedagogy was due to:

- discrepancies and inconsistencies in classrooms and schools;
- distant teacher-student relationships, inauthentic assessment;
- overcrowding of the curriculum;
- reductionist approaches to curriculum planning, delivery and school organization;
- student engagement in irrelevant information reproduction; and
- inequitable access and use of technologies contributing to economic and social equity.

However, there were some successful outcomes gained through middle years pedagogic and school reform initiatives like South Australian Essential Learnings, Education Queensland New Basics and proposed Australian Capital Territory Key High School Learnings, National Schools Network and

Disadvantaged Schools Program including:

- collaborative involvement of teacher centered school reform;
- student engagement through a whole school commitment to connected pedagogy; and
- integrated curriculum and authentic assessment that creates purposeful life learning and critical consciousness of self, community and the world.

### *Creative learning and thinking*

The literature maintains that learning and educational authenticity are achieved by cultivating metacognitive thinking and problem-solving capacities useful both to individuals and to society.

These qualities lead students to the making of responsible and accountable decisions, both of which are likely to be transferred more readily to life beyond school (Suda, 2006; Cuttance, Angus, Crowther & Hill, 2003). Creative learning accounts for the degree to which instruction encourages the construction of knowledge, so that the class as a whole can be engaging in higher-level thinking, through substantive conversations and a disciplined inquiry (Luke et al., 2003; Avery, Kouneski, Peterson & Odendahl, 2001; Anderson, Greeno, Reder & Simon, 2000; Choo, 2000; Newmann & Whelage, 1995).

The type of dialogue constructed in classrooms can largely affect the way creative learning is expressed and experienced, and levels of creative thinking that can be developed. Substantive classroom dialogue between teacher and students needs to encourage the motivation to take risks and express thinking processes. Classroom language needs to become more explicit and practical if middle years students are to clearly express the abstract thinking involved in creative learning and problem solving. Thus, the teacher's expectations and competence of the constructions of knowledge and thinking will be reflected in the language modelled for students and the types of text

resources made available for critique, reflection and information (Freebody & Luke, 1990).

The use of thinking tools worksheets such as PMI (Plus Minus Interesting) which summarise dot points of thinking, dramatic plays or songs to demonstrate learning in a creative way (as in Gardner's Multiple Intelligences hypothesis) may be effective strategies for innovative pedagogies to engage students' learning. However, it is not clear in the literature how students will develop a command of the language and language forms that are more formal and abstract. These language forms are reflective of those used in philosophical inquiry and higher order thinking and are 'dissimilar to the informal or natural speech typical of student verbal language' (Kress, 1994, p. 35). If it is the construction of knowledge and new meanings which are socially valuable, then formal speech is important in modelling good practice for strategies involving creative thinking. It is also a challenge to assess such outcomes and processes of thinking, in order to meet measures of school accountability in the current state-wide curriculum. It is clear that the quality of teacher practices, knowledge and competence for creating classroom environments which support these approaches to learning are vital for student learning in general and creative learning outcomes. There appears to be little focus of these approaches in current mandated curriculum or education policy. These practices seem to be largely left to schools or individual teachers who value this type of pedagogy, to fit into their everyday timetables and mandated curriculum.

### **Creativity for democratic schooling**

The literature reveals many approaches to democratic schooling including those outlined in the UNESCO report: the 4 pillars of learning: learning to know; learning to do; learning to be; learning to live together, learning to live with others (Delors, 1996). O'Rourke & Dalmau (2002) also describe 'Four Pillars for Third Millennium schools' of 'Education for survival, Understanding our Place in the World, Understanding community and Understanding our personal responsibility;' as

approaches to a democratic philosophy (2001, p. 17). These approaches to democratic practice support schools' values, vision and focus for authentic approaches to pedagogy, engagement and learner and building school communities. Olssen (2004), Riddell (2001), and Pearl & Knight (1999) discuss that the notions of democracy, power and choice appear to be an integral reality for adolescent life in and out of the school community. It seems that the practices of democracy, power and choice can affect students' future employment opportunities and their interpersonal and intrapersonal abilities to function as responsible citizens. Indeed, teaching and learning for creativity is an approach to pedagogy that can provide this context for democratic schooling, particularly when schools are planning policies such as charter priorities and curriculum. However, democratic schooling should be 'education through democratic means rather than only about democracy' (Brennan, 2000, p. 5).

Teese (2000) confirms the importance of curriculum with regard to democratic schooling, explaining that 'how the curriculum is constructed over time, the values that animate it and the demands framed within it are all crucial in the production of social inequality' (2000, p. 2). It is suggested that social inequality can be influenced by the structuring of schools and curriculum, codification of subjects and authoritative systems of cognitive and cultural demands (Lingard, 2010; Csikszentmihalyi, 2008; Teese, 2000). Social inequity, change and democratization are 'dependent on the school community's values, people's historical experience of academic schooling and the extent to which formal education infuses their life-styles and employment' (Teese, 2000, p. 3). Democratic schooling would encompass students negotiating curriculum, providing real-life understandings of how knowledge functions, and how they can contribute to the knowledge of others, and be accountable for their choices. This focus on accountability is reflected in some of the characteristics of creativity in Table 1 (pp. 37 - 38), and is best summarised by Giddens (1998), who proposes that the relationship between the individual and the community in a civil democratic

society should be founded the notion of 'no rights without responsibilities, and no authority without democracy' (1998, p. 64). Creative pedagogies can provide a context of experiences for practising skills of autonomy and collaborative discourses in an arena of learning so that students can recognise mistakes and redefine choices (Ofsted, 2010; Chell & Athayde, 2009; also labelled 'procedures' by Yashin-Shaw, 2001, p. 122).

The active participation of students and teachers in such democratic processes highlights Teese's (2000) contention that 'the curriculum also grows in importance, with its hierarchy of opportunities and its ability to determine academic merit' supporting the previous arguments of Dimarco (2009) and Prosser (2006). It is through the 'curriculum that the financial and cultural reserves of educated families are converted into scholastic power' (Teese, 2000, p. 4). It seems that when the pedagogy is centrally controlled and needs to reflect creativity, culture and economy, it may result in hidden curriculum. Lingard (2010, p. 10) labels this as 'glossifying' of school achievements, which result in the creation inauthentic practices and lack of teacher judgement and student engagement.

Brennan (2000) explains that 'Student Forums' can be the place where students engage in discourses about education reform, worthwhile knowledge areas, futures studies and critical literacies.

Brennan asserts that 'this could be in the form of projects which are accredited at school level,' developing a 'pool' of student expertise and resources (2000, p. 19). Hipkins (2011) argues that for teachers, collaboration is duly important, so that there is diversity to access the power of collective thinking; a common ground where teachers who are interacting can stand together and share the same vision. Thus control and authority must be able to be distributed across the group so that time for planning and interaction will see the emergence of new insights and ideas' (2011, p. 13). It seems that the issue of who has power in classrooms affects the engagement, motivation and collaboration for creative learning in classrooms.

### **The teacher, student and power**

There is an obvious power relationship with regard to the acceptance and identification of creative learning in the middle years of schooling. This third main discussion, reviews the influences of who is in power in the relationship between teachers and students, and its impact on the approaches of teaching and learning in every day classrooms. While Csikszentmihalyi's (2008) triangulation of the creative learning context in Figure 1 (p. 27) can be applied to the middle years issues of adolescent alienation, it is the concept of who is in power which is significant. This understanding of power relationships in classrooms and creative learning in Figure 1 can reveal whether such strategies can be successfully integrated in mainstream classrooms.

According to Kruger, Cherednichenko, Hooley and Moore (2001) 'schooling is a product of the modern economic state and depends on the money and bureaucratic systems for its existence.' (2001, p. 17) It is the understanding of the consequences resulting from the 'interconnections of policy, management and teaching practice,' which produce 'what schools do' (2001, p. 17). Teese's (2000) writing exemplifies the effects on student learning outcomes, arguing that poor scholastic achievement is unacknowledged and recurring on a large scale 'except back- to justify cutting funds to government schools to impose punitive testing programs and to demand ever greater contestability and transparency from schools already exposed to failure' (2000, p. 2). In turn, learning outcomes and environments for implementing innovative pedagogies like creative learning are also affected. Australian teachers are confronting centralized accountability demands and controls on their practice, resulting in a disempowerment and constraint on teachers to deliver an authentic model of pedagogy, (Lingard, 2010; ConsultQLD, 2004; Kruger, Cherednichenko, Hooley & Moore 2001, p. 30). Kruger, Cherednichenko, Hooley and Moore (2001) contend that these 'changes in education's bureaucratic power structures have radically curtailed teachers' freedom to use their professional judgement as the principal reference in planning for students' learning' (2001,

p. 30). When teachers' freedom to take risks in curriculum and be original and flexible in their practice is restricted, it affects their students' capacities to utilise creative strategies to be engaged and enhance learning outcomes also (Hipkins, 2011; Lingard, 2010).

Creativity and innovation require high risk teaching strategies, not irresponsible teaching behaviour, with a concern for a long term view of a learners potential, a willingness to wait for results, and the confidence to act intuitively at times. However in many everyday classrooms the creative elements of pedagogy and curriculum design are often controlled by school systems that perpetuate an inflexible learning environment, resulting in inauthentic approaches to pedagogy, leaving academic development measurable only by standardised testing (Lingard, 2010; Sawyer, 2003).

Paradoxically teachers and students are alienated by standardised pedagogic practice, rendering both powerless.

The power of teaching for creativity affects the relationship of teachers and students, as illustrated in Csikszentmihalyi's triangulation of creativity in Figure 1 (p. 27) in many ways. When the relationship of teaching and learning for creativity is dynamic, fluent, collaborative and engaging, it reflects a classroom environment where both the teacher and student are problem finders and problem solvers. However, O'Rourke & Dalmau (2002) suggest middle years students view learning as teacher constructed with abstract thinking, that is difficult to associate with and not self-achieved. Learning is reflected by grades and correctness, board notes and text books and a lack of enjoyment and overall frustration (O'Rourke & Dalmau 2002, p. 23). The attitudes held by teachers about the place of creativity in schools are mixed and affect the values and implementation of creative learning. Creativity is often recognized as a powerful motivating force and can develop high levels of individual achievement, and be reflective of learners' development patterns. Conversely, there are many other priorities in classrooms that tend to dominate attention over

creativity, such as basic knowledge and skills, codes of response and behaviour, and the conduct of relationships. These can result in disrupted classrooms in that they can challenge norms, order, and standardised learning due to the increasing significance of test scores and standardized curriculum as representative of the public measure of educational quality (Starko 2004).

While the idealised notions of Table 1 (pp. 37 – 38) outline teaching and learning practices which develop creativity in classrooms, these theories have not accounted for the power struggles faced by teachers in everyday classrooms when attempting to integrate such pedagogies. Starko (2004) contends that many teachers who practice mainstream standardised curriculum do not try teaching for creative learning due to its lack of standards and the difficulty inherent in testing for creative thinking. Clearly, if students are to democratically exercise choice and communicate as active participants in a global citizenship, schools must enable teachers to teach, model and engage their own practice in strategies for finding and solving problems with their students. When both teacher and student are collaboratively engaged in learning, this relationship reflects more about the communicating of information pertaining to the ‘what’ and the ‘how’ of the disciplines in the curriculum rather than being about a struggle for power. Hipkins (2011) contends that this power relationship can be more equalised when the school support system opens up to wider collaborative networks or expertise. Teachers also need broader networks to support practice in their classrooms and build new types of pedagogic content knowledge, which prompts a new way of looking at the dynamic complexity inherent in networks and power. These networks and ‘connections can allow schools and teachers to follow mandated curriculum, but also be left to determine their own best practices for implementing the new strategies’ (2011, p. 10).

### *Developing approaches to creative learning*

Previous discussions have emphasised the importance of understanding those practices and features

of creative pedagogies which contribute to improving student engagement and learning. Specifically this section includes: the classroom environment and motivation for student engagement; authentic and creative pedagogies; authenticity, creativity and the teaching and learning environment; assessment of creative learning; and strategies for teaching creativity. The teaching and learning practices of authentic pedagogies will be discussed in light of creative pedagogies and their applications to the middle years of schooling and assessment. Finally, an evaluation of specific teaching strategies as characterised and defined in the literature and in Table 1 (pp. 37 - 38), will further suggest indicators of learning outcomes and creative practice for this research; and the possibility of such pedagogies being supported in everyday classrooms.

#### *The classroom environment and motivation for student engagement*

There is a growing awareness of the complexities of the role of the teacher in the development of creative learning, both conceptually and methodologically. These complexities influence the driving force for motivating student engagement and the ways teachers understand the classroom environment. Hill in DEET's publication, *Middle Years Matters* (2000) comments 'that it is impossible to expect teachers to do more. What is needed is to find ways to help them to be more effective in their efforts' (2000, p. 4). Teachers need to agree on a vision of high quality, intellectual works (Dimarco, 2009; Fettes, 2005; NCSL, 2005; Covington, 1998). Educators want students to produce something themselves rather than just reproduce knowledge on tests by incorporating meaningful projects into their curriculum. There are many techniques and curriculum practices that are currently used to enhance this learning process, including:

- Gardner's model of Multiple Intelligences (2003) including linguistic, musical, logical-mathematical, spatial, bodily-kinaesthetic, intrapersonal, interpersonal and environmental.

- Students being encouraged to be creative and personal in developing their projects, and they also work cooperatively with other students for extended periods of time.
- de Bono's 6 Thinking Hats and Philosophical and Collaborative Inquiry, specifically Green hat thinking which is dedicated to creative problem solving and innovation (Luke, et al., 2003; Splitter, 1995; Calfe, 1994; de Bono, 1992).
- Bloom's Revised Taxonomy (Churches, 2008).
- Chell & Athayde's (2009) contention that their model of *The Tool*, is one which supports innovative behaviour, attitudes and skills through social and experiential learning. They conclude that the 'more opportunities offered by schools and colleges, the more they would be able to develop young people's innovative behaviour' (2009, p. 26).

However, meaningful projects may not engage students in higher order thinking and learning strategies if the skills being taught are isolated to those projects and not practised as an everyday embodiment of classroom pedagogy (O'Rourke & Dalmau 2002). It is established in the literature, that the development of creativity for teachers and students addresses this issue. Csikszentmihalyi (2008), Craft (2003) and Runco & Albert (1990) explain that a classroom environment which practices creative learning includes:

- identifying profound differences between types of problem solving and problem generating behaviours; and
- understanding the interaction of learners within social systems, and the particular impact of diverse social systems.

The literature also suggests that engagement for learning occurs through creating an environment motivated by trust and security in the classroom. This environment effectively enables teachers and learners to focus on the issues, goals and problems that confront them through effective

collaboration and networking (Berkemeyer, Bos & Kuper, 2010). O'Rourke & Dalmau (2002) agree, arguing that a success-supporting learning environment occurs in 'small schools and classrooms, where teachers and students know each other well and work in an atmosphere of trust and high expectations' (2002, p. 28). Freire (1973) describes this milieu as increasing students' creative and critical powers enabling them to perceive the world accurately, and to see it as alterable. Brennan (2000) supports this, noting that 'cultural literacy' is also necessary for middle years students to understand how globalisation and diversity affects local and global settings and communities (2000, p. 6). A students' cultural literacy can be developed by constructing awareness of his or her beliefs, purposes, and potential to bring about change through practices of social and self-awareness.

These are areas of pedagogy that encompass philosophical and collaborative inquiry in Barrow (2010), Scholl, Nichols & Burgh (2009), Splitter (1995) and Lipman (1988), which are also supported by Delors (1996) in the Four pillars of learning, and creative pedagogies in Hartley (2006) and Cropley (2001). To understand the wider world, students will need to manage the multi-literacies of each tradition of knowledge, encompassing oral, visual, print and multimedia. These multi-literacies provide different genres or frameworks and meta-languages for their understanding, interpretation, communication and power (Luke 2002; Bull & Anstey 1996; Cope & Kalantzis, 1993). This capability is important for empowerment and choice making as those able 'to produce meanings and messages,' are few by comparison with those who 'consume meanings and messages' (Kress, 1994, p. 3).

According to Rogers (2003), the learner is to assume full responsibility in the given context with the aid of a mentor, for decisions, actions, and their consequences enabling learners to become self-directed, self-responsible, and autonomous. To promote these adaptive social and learning skills,

teachers must teach adaptive social perception and problem-solving skills, which are achievable through creative learning. This requires the classroom environment to be constructed from a process of inquiry, reflection, hypothesis testing, validation, and particularly one where the teacher and learner are actively engaged and take chances with each other (Berkemeyer, Bos & Kuper, 2010; Prosser, 2006; Hiebert, Gallimore & Stigler, 2002).

The arena for change in the classroom environment is founded on the creative potential of teachers and students as responsible problem solvers and finders. These concepts are not new to education. Dewey contends that when students engage in 'learning by doing' the gap narrows between school and life (Dewey, 1915, p. 294). Here, student engagement is cohesive when students are involved in deliberative and substantive discourse. When learning outcomes are unclear, students are also unclear about expectations of the task, and they find the teacher, curriculum and learning confusing or inaccessible (Freebody & Luke 1990). With specific regard to creativity, this difficulty was identified in Cormack's (1996) research findings, which clearly indicate that students need to be involved in the planning and negotiation of the curriculum, so they are sharing, analysing and realizing the potential of their experiences and thinking with peers and mentors (1996, p. 237).

Chell & Athayde (2009) and Amabile (1990) support this type of classroom environment, arguing that learners are likely to adopt a more creative or innovative approach to their learning if they are initially intrinsically interested in the activity, and if the social environment does not demand a narrowing behaviour into the process and production of learning outcomes. Therefore, 'teachers and students are both creative with the availability to be engaged in forms of creative autonomy to improvise in their classroom (Sawyer, 2004). The types and samples of student learning displayed in the physical classroom environment also affect the process of originating ideas, taking risks and making mistakes. Clearly students' attempts and the processes of creative practice are intrinsically

motivated, valued and honoured by such public sampling. Berkemeyer, Bos & Kuper, 2010, Suda (2006) and Yair (2000) acknowledge that intrinsic motivation is necessary for sustaining creative effort to derive rewards from the activity itself rather than from the product only. This is an important issue for the development of creative learning as it can lead to an unrealized creative potential in students, due to a lack of exposure to a congenial or safe environment.

### *Authentic learning and creative pedagogies*

These theories of motivation for teaching and learning and the classroom environment are related to the nature of authentic pedagogies. Authentic tasks deal with real issues of personal importance to students, particularly when they realise they must enter the workforce (Chell & Athayde, 2009; MACER, 2004; Brennan, 2000; Covington, 1998). Students are active participants in their learning, bringing different levels of expertise and interest to tasks, thus reflecting the need for flexibility and time of the teacher and learner (Starko, 2004; Mitchell, 2003). Students need to know how to perform, when to perform, and how to change the performance to fit new and different contexts.

Poor thinkers and problem solvers may possess the skills they need, but they may fail to use them in certain tasks (Sternberg, 2003). Therefore, authentic assessment strategies need to value the process and construction of skills and the disposition to do so as well. Sternberg's (2003) research on creativity supports this, showing that 'children with creative and practical abilities, who are almost never taught or assessed in a way that matches their pattern of abilities, may be at disadvantage in course after course, year after year' (2003, p. 6).

Cumming and Maxwell (1999) present findings which explore the different interpretations of learning assessment based on:

- performance assessment;
- situated, problem based and competence based learning and assessment;

- the complexity of expertise; and
- camouflage of authenticity and simulated learning experiences.

These findings and those of Wiggins (1993) suggest that the attention drawn to the context and purpose of a task provides authenticity and motivates learning. This notion was further explored by Cropley (2001), whereby 'authentic assessment emphasises concrete experiences in settings resembling real life and examinations testing properties closely related to the real life practice of the discipline in question' (2001, p. 169). He contends that authentic assessments offer more than academic grades. While many students' successes are reflected in high marks, often these 'grades may be a poor reflection of the problem solving, critical thinking, divergent skills of novelty production' (Cropley, 2001, p. 169).

#### *Authenticity, creativity and the teaching and learning environment*

The characteristics of creative pedagogies and environments supporting creative learning substantiate their use as authentic practices for the middle years of schooling. Creative pedagogies support conditions for reflection and productive cognitive conflict for students individually and collaboratively with peers and teachers. O'Rourke & Dalmau (2002) and Heron (1993) contend that teachers who engage in authentic practices:

- Do not assume full responsibility for all aspects of learning process, teachers are no longer receivers and transmitters of curriculum and information.
- Reduce the power of structure over learning. Teachers guide and prompt, and confer and collaborate on decisions about content and process rather than control or dictate.
- Create curriculum and assessment at a classroom level.

The teachers' role also involves providing an environment conducive to learning, but where students

can take full responsibility for self-directed learning (O'Rourke & Dalmau, 2002). More recently this notion can be conceptualised as 'Teachers as Reflective Practitioners' who develop curriculum, acting as consultants, decision makers, analysts and activists for school restructuring. They are inquirers and reflective practitioner who improve themselves by analysing and evaluating daily practice (Ofsted, 2010; Fettes, 2005; O'Rourke & Dalmau, 2002; Kruger, Cherednichenko, Hooley & Moore 2001). Ofsted (2003) confirms that 'the most successful teachers are pragmatic and open to new possibilities, wherever or however they occur' if they are to develop their own creative practice (2003, p. 2), while Fettes (2005) believes this starts with teacher education programs focusing on imagination pedagogy and reflective practice. Similarly, Milgram (1990) acknowledges that students of all ages place high value on creative thinking on the part of their teachers. Thus teachers creative skills are necessary, indicating that creative approaches to teaching and learning can be an applicable model for both teachers and students.

Factors such as the school community and assessment policy can affect the success of pedagogic change in classrooms. According to Cormack (1996) real life assessment tasks with diverse opportunities for students, and community resources and expectations are features that promote students' level of engagement and ability to participate and experience success at a range of levels (Cormack, 1996, p. 234). Teachers need to build negotiation about content, timing and processes into their assessment practices (Cormack, 1996, p. 247). Cropley (2001) proposes that collaborative experiences between teachers and students, where neither is an expert, model elements of authentic practice (2001). Collaboration in this context supports the characteristics of creativity in Table 1 (pp. 37 - 38), thus enabling opportunities for teachers to model the curiosity and drive to be involved in novelty production.

Whole school community collaboration is also important in building better creative learning environments. Many schools in Victoria have implemented change for authentic practices in middle years schooling, by establishing networks between Primary and Secondary schools, transition programs, home rooms, fewer different teachers, sub-schools or team approaches, authentic assessment, less instruction and negotiated curriculum (MEETCYA, 2008; DEET, 2001). Research by Hipkins (2011) concurs that establishing out of school networks improves teacher professionalism and support for achieving improved learning outcomes. While Prosser (2006), MACER (2004), and Day (1997) assert that change in schools also involves moving outwards to its community. Day (1997) argues that this creates an interactive, collaborative culture, counteracting the hierarchical relationships of the traditional order, and parental reserve and caution at challenging teachers' professionalism. In this way, those 'same elements of ownership, control and relevance characteristic of creative teaching and learning make the community an innovative educational force' (1997, p. 82). However, before schools move outwards to the community, the establishment of a supportive and professional teaching community is an equally important influence on the pedagogy and practice adopted by colleagues, as suggested by Dimarco (2009). There are many approaches discussed in the literature (Prosser 2006; Fettes 2005; and Kruger, Cherednichenko, Hooley & Moore, 2001) which develops professional teaching communities, including:

- Collaborative assessment conferencing and protocols outlined in the Australian National Schools Network, including protocols of The 6A's: Authenticity, Academic Rigour, Applied Learning, Active Exploration, Adult Relationships, Assessment; ATLAS protocols Authentic Teaching, Learning and Assessment for All Students including Dimensions of Quality Based Learning, Tuning, Consultancy, Scaffolding, Giving Feedback.
- Sustaining evidence based approaches (qualitative and quantitative) to document the process of practice and change, and assessment outcomes.

- Providing opportunities for constructive and reflective discourses on pedagogy to develop shared understandings with a view for improvement.
- Acknowledgement that partnerships of collaboration work through goodwill and reciprocity. This is possible if there is dispersed leadership that is pedagogically focused with transparent management.

The substantive discourses for critical reflection and collaborative assessment about practice and student learning by students, take times and practice. The processes of 'suspending judgement, listening, questioning, wondering to develop a common shared language and vision about standards of learning outcomes and teaching practice' are achievable through teachers engaging in creative pedagogies (Australian National Schools Network, 2001, p. 39). Furthermore, schools need to become flexible and open to new roles, relationships and interactions of the whole school community to maintain curriculum change, and are therefore non-linear in their approach. Berkemeyer, Bos & Kuper (2010) describe that these networks are a spiral development of knowledge which uncover the dynamics of positive changes in student learning.

The expertise needed to assess processes of problem finding requires high risk taking for teachers. If teachers are not willing to take intellectual and practical risks for change, then the ability and encouragement of middle years students will also be impeded. Sawyer (2004) asserts:

when a classroom is collaboratively creative, the teacher is not the sole creative force, but rather a facilitator for the entire group's creativity. The teacher must have a high degree of pedagogical content knowledge- to respond creatively to unexpected student queries, a teacher must have a more profound understanding of the material than if the teacher is simply reciting a planned lecture or script (2004, p. 15).

Other recommendations in the literature by Berkemeyer, Bos & Kuper (2010) and O'Rourke & Dalmau (2002) for supporting change for authentic pedagogies in the middle years are that teachers and schools should:

- Begin forming a shared vision of strengths and weaknesses of curriculum.

- Define limitations of the changes depending on the context: whole school, subject, aspects or events. This will take into account staff and student readiness to initially engage in change. Overall success for this is longitudinal and systematic to measure outcomes of change and for shifts in culture to occur.
- Consider using teaching and learning for creativity as a key indicator for staff and students in performance reports/management.
- Embed pastoral care in the curriculum for simultaneous support of intellectual and social needs of adolescents.
- Provide for genuine consultation between teachers and students for democratic schooling.
- Allow genuine time allowances for a teacher's reflective practice and cooperative planning with structural means of support to enable negotiation and change.
- Shift culture, attitudes and priorities of school before proposing change. Gain whole school support and develop coordinated clusters focused on action-planning for change and wider networks for resource and facilitator support.
- Adopt short term and medium term planning reflecting a more flexible timetable that provides time for inquiry and review.
- Set up school-to-school or cluster networks where new network-specific knowledge in the participating schools work to change classroom pedagogy and support, to enhance school quality, to improve student achievement and motivation.

### *Assessment of creative learning*

An authentic learning classroom environment focuses on assessment not as a mere measure of the product of learning, but as a means of informing teachers and learners about their experiences, knowledge and support needed to promote learning. According to Suda (2006), Prestine, McGreal and Thomas (1997) and Sternberg (1996), authentic assessment of cognitive achievement outcomes

requires informed teacher judgement, and the processes of assessment should be used developmentally not judgementally. MCEETYA (2008) documents that assessment of student learning should be measured in meaningful ways, including assessment for learning, assessment as learning and assessment of learning. The goal of assessing or identifying creative learning is not to generate creativity scores or to divide students into creative and non-creative categories. Rather teachers need to recognise creativity as it develops and create those conditions for it to grow through a pedagogy that reflects flexibility, motivation, originality, and independence every day. This environment enables teachers to observe students' creative behaviours over a period of time, rather than once off flexible activities planned for the day of the observation (Ofsted, 2010; Starko, 2004). Therefore creative assessment is progressively dynamic. While, paradoxically, creativity involves conscious thinking with prior knowledge, it also requires acceptance of fantasy and tolerance of non-rational impulse (Yashin-Shaw, 2001; Cropley, 1996). For instance, teaching or facilitating autonomy requires explicit explanation, scaffolding, promoting adaptive social skills, and creating conditions where students exercise reflection, hypothesizing, validating and criticality of their learning (Luke, et al., 2003; Australian National Schools Network, 2001; Leach & Moon 1999).

Many of the arguments regarding engagement, reflective practice and creative learning focus on developing the processes and interactivity for higher order thinking, problem solving and seeking. However, assessing creative learning can prove difficult, as a person can be creative but not produce anything novel. In this context, if teachers practice pedagogy that relies on learning outcomes which are product focused, they will encounter difficulties in evaluating these assessments, contributing to the difficulties teachers face when prioritizing creative work (Starko, 2004; Craft, 2003; Ofsted, 2003). Interestingly, when assessing creativity, Sternberg (1996) suggests giving a 'separate grade to explicitly reward and encourage the creative process and effort, regardless of the

quality of the overall assignments' (1996, p. 23). Arguably, this compartmentalises learning and it is not reflective of problem finding or performance based learning from a holistic view. Some of Sternberg's (1996) assessment approaches require that teachers need to plan for some opportunities for creative thought in assignments and tests. These assignments would pose questions that require factual knowledge, recall, analytical thinking and creative thinking to reflect teaching and learning for creativity. However this is still not a focus on creative pedagogic practice, rather it is an attempt at brushing up old activities to include some new ways of thinking and meeting creativity criteria.

The literature describes many approaches to assessment of creative learning, all of which incorporate elements of inquiry based reflection and evaluation, some are collaborative and are usually reflective of the task, both product and process. They focus on performance based assessment of multifaceted skills to measure student competence as shown in Table 2 (p. 63), which compares the two elements of creative practice: process and product. Each element in Table 2 describes the theoretical assessment structures, evaluation techniques and suggests activities to apply these indicators to classroom practice, as suggested in the literature:

**Table 2: Assessment strategies of creative learning**

<u>CREATIVITY</u>	<u>Assessment structure</u>	<u>Evaluation techniques</u>	<u>ACTIVITIES</u>
<u>PROCESS FOCUS</u>	<ul style="list-style-type: none"> <li>Negotiated curriculum and performance based projects focusing on: open-ended problems with multiple paths to solution; expressing ideas; looking at information in multiple contexts and from varied perspectives;</li> <li>Focus on 'how' the student pursues tasks and ideas.</li> <li>Comprises complex tasks practising skills and attitudes associated with creative thinking;</li> <li>Defending choices.</li> <li>Developing plans for completing assignments, resources and detailed time-lines; and</li> <li>Invoke real-world applications or discover relationships that constitute or encompass the subject/concept (Prosser, 2006; Starko, 2004; Hiebert, Gallimore &amp; Stigler, 2002).</li> </ul>	<ul style="list-style-type: none"> <li>Complexity of process gives information feedback learning developments for reflection;</li> <li>Self-evaluation developed from multiple activities to support creative thinking;</li> <li>Progress log including roadblocks and how problems were surmounted;</li> <li>Participation in daily class discussions of progress (anecdotal assessment and validation); and</li> <li>Specific criteria to maintain explicitness to complement judgement and expertise (Berkemeyer, Bos &amp; Kuper, 2010; Chell &amp; Athayde, 2009; Cropley, 2001).</li> </ul>	<ul style="list-style-type: none"> <li>Focus on divergent thinking, general knowledge and thinking base;</li> <li>specific knowledge and skills base;</li> <li>task commitment;</li> <li>motives and motivation;</li> <li>openness and tolerance of ambiguity;</li> <li>Interviews;</li> <li>Observations;</li> <li>Student self-evaluations or think aloud;</li> <li>Scoring rubric to:               <ol style="list-style-type: none"> <li>identify dimensions or variables to be assessed</li> <li>determine scale of values used</li> <li>set standards or descriptors for each value;</li> </ol> </li> <li>P4C and collaborative inquiry modes;</li> <li>DOVE guidelines;</li> <li>KJ method in Cropley (2001, p. 139); and</li> <li>Mind maps (Berkemeyer, Bos &amp; Kuper, 2010; Starko, 2004; Cropley, 2001).</li> </ul>
<u>PRODUCT FOCUS</u>	<ul style="list-style-type: none"> <li>Peer assessment of project for review and discussion;</li> <li>Review end results of students' efforts, examining complex products produced over a certain period;</li> <li>Invoke real-world applications;</li> <li>Involve comparing products with a designated set of criteria; and</li> <li>Goal setting and rewards (Chell &amp; Athayde, 2009; Hiebert, Gallimore &amp; Stigler, 2002).</li> </ul>	<ul style="list-style-type: none"> <li>Information feedback is criterion assessed to reveal strengths and weaknesses of products and to improve future projects;</li> <li>Groups share strategies and results; and</li> <li>Discussion questions about organization, strategies, relationships effectuates, patterns, reflection on past problem solving (Mitchell, 2003; Bresler, 2002; Sternberg, 1996).</li> </ul>	<ul style="list-style-type: none"> <li>Essays;</li> <li>Projects;</li> <li>Works of art;</li> <li>Demonstrations;</li> <li>Performances; and</li> <li>Portfolios that contain a variety of products (Starko, 2004; Bresler, 2002; Sternberg, 1996).</li> </ul>

### *Strategies for teaching creativity*

Through effective practice of creative pedagogies, students' confidence and self-esteem can be increased, not only making a positive impact on curriculum, but also on student attitudes towards learning and school attendance. In summary, the research by Ofsted (2010), Chell & Athayde (2009), Csikszentmihalyi (2008), and Beutel (2003) discusses how the skills, classroom conditions and pedagogic practices for creativity are promoted by teachers to engage students in the following:

#### *Student learning:*

Students develop through a process of self-discovery, knowledge construction and problem solving using real life situations and making informed choices. This self-directed work encourages spontaneity, experimentation, and acceptance of constructive non-conformist behavior; these skills are important for examining controversial issues. Students are also developing skills of rehearsing and reviewing initial efforts and delaying gratification; mastering and applying meaningful rules. Overall, these students are learning what is relevant to them and what they can do best.

#### *Classroom environment:*

It is important for teachers to create organisational and structural conditions that allow open and reversible distribution of roles, themes, problems and sharing of activities (negotiated curriculum) and self-evaluation. By having a cooperative, socially integrative style of teaching and assigning active roles to students in the collaborative learning process it avoids group pressure situations associated with competition. Creative learning can best be supported in a classroom where teachers successfully establish an atmosphere that allows learners to interact without fear of risk taking or voicing thought or sanctions. Other ways teachers can provide a supportive classroom environment include: maintaining adequate alternations of periods of activity and relaxation, and fostering cognitive development of students. This is achievable when classrooms engage students in rich and

varied experiences, including different settings, using profiles or role models of creative people, materials and learning styles.

*Teacher values:*

To develop collaborative engagement between students and teachers, both teacher and student need to be actively engaged to take chances with each other. It is important that teachers demonstrate empathetic behaviours of students to provide them with a sense of acceptance. When teachers can tolerate sensible or bold errors and rewarding courage as much as being right, students will be more motivated to trust in engaging in creativity. This is particularly important when providing informative positive and constructive feedback for inquiry and generating behaviours when problem finding as well as when problem solving. Teachers also need to value and support free play and manipulation of objects and ideas (What if..?).

*Assessment:*

Assessment should provide a set of criteria that students must meet over an extended period of time, in order to enable developmental assessment of the process of learning. This can be achieved through developing assignments that elicit fantasy, by creating imaginary circumstances enabling use of learner's development. Also, longer learning times allow for flexibility and risk taking when engaging in creativity. To maintain student engagement, processes of assessment should be used developmentally not judgmentally, by avoiding instant feedback that may promote rigid or stereotyped patterns of behaviour or solutions. Therefore, assessment needs to challenge students' present capacity, yet permit some control over the level of challenge. Also, assessment needs to reflect how students apply problem solving skills in new situations: material, symbolic and social.

### *Metacognitive skills:*

Metacognitive practice links to flexibility, risk taking and elegance of problem solving: the monitoring and control of attitudes for example students' beliefs about themselves; their values of persistence; their personal responsibility in accomplishing a goal knowledge requires effort, concentration, discipline and determination; memory for factual knowledge, technical proficiency; and special talents. This skill helps students to learn to cope with frustration and failure through self-evaluation of progress: What do I think? How do I know? What can I do? And how do I feel about it now that I have tried? Using formulated statements to provoke responses and questions from students rather than asking pre-formulated questions. Metacognition models qualitative error analysis: What strategies did you use to solve...? And provides opportunities for students to think and be creative across the whole curriculum. Teachers need to facilitate and model the modes of inquiry, thinking and creativity, the dialogues necessary for positive self-talk, evaluation as well as to appreciate and acknowledge their own and others creative behaviours.

There are other factors affecting the assessment and teaching of creative pedagogies for the middle years of schooling, including gender, discipline for learning and motivational reward. Craft (2001) finds that:

studies into assessment of creativity show that teacher gender also affects student outcomes. Females seem to value the personal side of creativity whereas males value the elegance of the product. The teacher's subject area is also found to impact on his or her confidence as an assessor (Craft, 2001, p. 24).

When applying strategies for creativity, it is important to develop and model the discipline necessary for creative thinking such as through performances of visualisation and drama and bringing ideas to life both imaginatively and physically. The research presented here reveals that rewards, when promised before a creative effort, can diminish both the motivation to continue similar activities later and the creativity of the activity itself. Therefore, rewards can be counter-

productive for complex thinking tasks. Sternberg (1996) argues that the short-term focus of most school assignments does little to teach learners about the value of delaying gratification. This indicates that ultimately teachers who make the time to teach students the value of contemplation support the enhancement of the quality of student work and makes their assignments more productive and fulfilling learning experiences. This notion may raise issues regarding the speed at which information technology and self-gratification of media influences middle years students in relation to the time and flexibility required to practice creativity; especially within a structured timetable.

By contrast, Chell & Athayde (2009) argue in their research that a 'system of goal-setting and rewards was perceived to be an essential component of building a safe environment in which pupils could take risks, be creative and increase self-confidence' (2009, p. 25). In this way, risk taking creates the classroom conditions where students have permission to occasionally get things wrong while also being encouraged to think a problem and its possibilities through and to resolve it. This strategy is not a feature of examinations or national testing, but is an important part of engaging young learners and increasing their self-confidence. Chell & Athayde (2009) discuss that the influence on parents' expectations of 'good grades' can affect this classroom condition of risk taking and a teacher practising more innovative pedagogy. They describe one case where a 'teacher noted the impact of praising a student whose performance did not exactly warrant it: the student appeared to rise to this new level of performance, appreciating the confidence expressed in her' (2009, p. 25). Clearly the assessment strategies and planning for creating a classroom environment for improved creative learning outcomes also need to account for parental attitudes while taking risks with student performance.

## **Conclusions**

The review of literature in this Chapter has revealed that current education must prepare learners to participate effectively in social practices in the community, and to be able to work in situations which model the aptitudes and attitudes for participation in lifelong learning and economic success. An education which embodies environments developed through authentic approaches to pedagogy, which support an engaging schooling experience for middle years students is imperative. Applying strategies for creative learning are arguably an authentic approach to developing these pedagogic outcomes. These strategies enable students and teachers to engage in the discourses, processes and production of novelty and value for higher order thinking through effective language and thinking in both collaborative and individual situations. In general, creative pedagogies can cater for diverse abilities, cognitive styles, motivational levels and circumstances. It is important to create a learning environment founded on collaboration, risk taking and discourse between students and their teacher.

The issues reviewed in light of the characteristics of creativity in Table 1 (pp. 37 - 38) as developed in this Chapter, represent the summarised ideals of creative practice for schools, as discussed in the literature. These indicators are used to guide the understandings of the classroom learning environment, to determine whether creativity could be supported in middle years classrooms, like the classroom in this research. In particular, this study aims to generate new knowledge about the gap between policy and research about the fate of innovation in schools and the impact of standards based curriculum on creative learning in middle years classrooms. While there is evidence in the literature which supports creative learning, it is important to understand those challenges faced by teachers who deal with meeting curriculum and policy outcomes in everyday classrooms.

Therefore, this study aimed to investigate the classroom strategies and approaches to teaching and learning which stimulate student engagement and support creativity. By researching the values and mindsets constructed by one teacher and her students, it was anticipated that further insight into the

challenge of introducing creative strategies into everyday classrooms, restricted by standards based curriculum could be reached. The use of one class made it easier to establish a rapport with the student and teacher, an important factor for collecting data based on a qualitative methodology of empirical phenomenology. As discussed in Chapter 3, the phenomenology research methods applied to this classroom environment enabled a structural analysis of the phenomena, as revealed by observations and experiences of the participants. Chapter 3 outlines the methodology and data collection methods used to construct and inform the writing of eight cases based on empirical phenomenology methodologies. Chapter 4 presents the findings from these eight cases, and how they were analysed against the main questions to present the case summaries, which would reveal six main themes. These themes form and structure the framework for the findings which are significant for understanding the possible context and applications of creative pedagogic strategies in everyday middle years classrooms. These analyses form a final interpretive case in Chapter 5, which reveals the challenges faced by teachers introducing innovative change to improve teaching and learning in a standards based classroom. Finally, Chapter 6 presents conclusions about whether or not creative pedagogies could be supported in everyday middle years classrooms, such as at Farwest Primary School (pseudonym), the school selected for the site of the case study reported in this thesis. This Chapter also suggests classroom practices and strategies which would be more conducive toward engaging teachers and students in authentic and creative practices in schools applying standards based curriculum.

## CHAPTER 3

### METHODOLOGY

#### Introduction

Much research has been done on the nature of creative strategies for improving teaching and learning in the middle years of schooling. However the application of creative approaches to middle years pedagogy has proved more problematic. Studies by Ofsted (2010), Suda (2006), MACER (2004) and Cuttance, Angus, Crowther & Hill (2001) have attempted to look at the how relationship of creative learning, pedagogy, and mandated curriculum might provide authentic learning experiences for students and meet their future societal and economic requirements for entering the life-skills and the workforce. Similar studies often reflect the continuing problem with the quasi-experimental and quantitative approaches used in such research. This often results in limited understandings of the relationship between creativity and strategies for teaching and learning practices. Several authors have commented on the need for qualitative research to reveal a rich understanding of the classroom engagement and to reveal the ways in which students and teachers learn through the application of creative pedagogies (Halsey, Lord & Jones, 2006; Starko 2004; Yashin–Shaw 2001). Taking up this challenge, this research applies the qualitative research methods of a case study approach, to gather data about the perceptions of the participants' experiences of teaching and learning and the relationship between innovative or creative learning outcomes. The case study will generate new knowledge about the gap between policy and research about the fate of innovation in schools and the impact of standards based curriculum on creative learning in middle years classrooms. The examination of classroom practice during the data collection and analysis process reflected the following research questions outlined in Chapter 1:

- What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?
- What methods of creative practices or strategies are identified or supported in a regular classroom?
- Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of an everyday classroom and curriculum conditions?
- What are the challenges faced by a teacher when introducing creative approaches to authentic learning, change and innovation into the classroom?
- Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?

Chapter 3 provides an overview of the research methodology and procedures adopted for this study. A detailed statement of the data collection approaches, analysis and generation of findings is presented at the beginning of Chapter 4. In particular Chapter 3 defines the methodology of empirical phenomenology for this research, first by exploring the research plan and rationale for the qualitative method of data collection and analysis. It also includes an overview of the participants selected for this study. The next section identifies the research focus, specifically explaining the framework for the data collection which used methods of participant observation, semi structured interviews, questionnaire and photography to stimulate dialogues. This section concludes with an explanation of the transcription of those taped dialogues and the processes of analysis used to interpret the transcripts in conjunction with the characteristics of creativity defined for this study (see Table 1, page 37-38). The third section explains the processes of case writing used for this study and the case analysis which reveals six emerging main themes which, in turn, inform and

structure the interpretive case writing reported in Chapter 5. Thus Chapter 5 is a summative case of those viewpoints and meta-analyses. Next, the fourth section provides a research summary of the data collection process, summarised in Figure 2 (p. 87). The final section then provides a discussion of the validity of the research and includes a summary of the potential risks and limitations of the research.

### **Research plan**

Research into practice is appropriately undertaken using a qualitative methodology to develop understandings of human behaviours or experiences from the participants' interpretation of the experiences (Ezzy 2002). Data gathered are then analysed and interpreted, and validated findings are developed. In this research, a qualitative methodology of empirical phenomenology was applied to the data collection in an attempt to provide an understanding of the experiences in the learning environment of a middle years classroom (Moran & Mooney, 2002; Moustakas, 1994) in which a teacher was attempting establish innovative pedagogic practices. The data collected provided further insight into the struggles a teacher faced when implementing creative or innovative strategies including creative learning experiences (Chell & Athayde, 2009; Craft, 2003). Ezzy (2002) and Denzin and Lincoln (1994) describe qualitative research as multi-method in practice. It deals with the role of meanings and interpretations through the systematic identification of bias and phenomena through the analysis of the data. By using the causal relationships of the data, the research question can be modified and reconceptualised (Ezzy, 2002; Moran & Mooney, 2002; Mertens, 1998).

Qualitative research facilitates the understanding of the processes by which events and actions take place, rather than being outcomes focused. This approach parallels the notion of 'developing creative practices which are process oriented rather than product focused (Miles & Huberman,

1994). Mertens (1998), Maxwell (1996), Denzin & Lincoln (1994) and Strauss & Corbin (1990) conclude that the interpretive nature of qualitative research enables the researcher to comprehend a situation and its events from the standpoint of the participants of the study without imposing pre-existing expectations on the phenomena under study. Qualitative research is not about seeking truths, it is rather an interpretation of the participant's perceptions of the experience. The researcher adapts and includes previously unanticipated dimensions of the participants' experiences which facilitate this interpretation of phenomena; hence the use of empirical phenomenology for this research.

### **Empirical phenomenology in research**

The conceptual basis for this research is empirical phenomenology. In general, phenomenological research seeks the individual's perceptions of and meaning derived from the phenomenon or experience (Donalek, 2004; Moran & Mooney, 2002; Mertens, 1998; Denzin & Lincoln, 1994). It seeks to define the components of the experiences or feelings to be researched by understanding the particular context within which the participants act and are influenced (Van der Mescht, 2004; Crotty, 1996). The researcher is exposed to the phenomena of the experiences that occur. In turn, this allows the researcher to generate results and theories that are understandable and experientially credible to both the participants and others (Donalek, 2004; Mertens, 1998; Moustakas, 1994). The intent is to understand and describe the event from the subjective point of view of the participant, thereby making subjective experience the centre of the inquiry. In empirical phenomenology research, the descriptions of an experience provide the basis for reflective structural analysis to reveal phenomena of the experience (Moustakas, 1994). Moustakas, (1994) explains that empirical phenomenology uses open ended questions and dialogue to provide elementary descriptions which are then structured, interpreted and reflected upon by the researcher. This data give meaning to the participants' experiences which are then further analysed to derive general findings and

understandings.

## **Participants**

The school selected for this research, Farwest Primary School (pseudonym), was identified through the researcher's own contacts and in consultation with the Department of Education (DEET) consultants. Farwest Primary School was situated in a low socio-economic area of the outer western suburbs of Melbourne. Previous to the selection of this school's participation, the researcher invited a selection of 10 principals in the Western Melbourne metropolitan area to nominate teachers whom the principals perceived explicitly attempted to enhance students' creativity through deliberate classroom practices. The schools for this selection process were from the Western Melbourne region due to ease of location for the researcher. An important criterion for the final selection of the school was that the school had a clear policy and procedure for taking photos of all students in the classroom, enabling data to be gathered photographically. Photographs were a significant data collection tool to be applied which would enable reflection and triangulation of experience. One teacher and the 25 students from a middle years classroom (Year 5/6) at Farwest Primary School were selected to participate in the research. Chris, the classroom teacher was highly recommended by Principal Jones as she was employed to enhance students' engagement and quality learning and to lead the enhancement of teacher performance through implementing innovative practices. The innovative practices which Chris employed were perceived by the researcher, at the initial stages of the research, to relate to approaches to creative pedagogies and innovative learning practices. The final selection of this teacher and class was based on an initial enquiry in which the teacher indicated strong willingness and interest in developing creative approaches in the classroom and curriculum and in participating in the research. The use of a single class made it easy to establish a rapport with the students, particularly when they were being photographed and interviewed. Then the principal of the selected participating school provided a

letter which conveyed the school's support for the research and letters of consent from parents, teacher and students were also obtained, as required by DEET and by the Victoria University Human Research Ethics approval procedures. The data collection for this research was undertaken in June- August 2004; at this time in Victoria, statewide testing included AIM, and the main curriculum practiced was the Curriculum and Standards Framework (CSFII) which was starting to go through the transition into Victorian Essential Learning Standards (VELS).

### **Research focus**

The qualitative methodology for this research was empirical phenomenology (Donalek, 2004, Van der Mescht, 2004; Mertens, 1998), which applied structural analysis of the phenomena revealed by experiences, observations, recording and documentation of practices of teaching and learning environment. This methodology enabled the researcher to develop understandings of the participants' experiences of learning outcomes in a standards based curriculum, to reveal whether creative pedagogies could be supported in this middle years classroom. This research identified the struggles and small progressions for implementing pedagogic change in a middle years classroom; and whether those practices and strategies supported, enriched and encouraged creativity at academic, personal, participatory and achievement levels for students. In brief, the data collection procedures included:

- collection of school based documents,
- a descriptive questionnaire,
- photographs of practice to stimulate conversations of eight sample visits,
- taped conversations about the photos with the participants, and
- case writing by the researcher (Eight cases and one interpretive case).

## **Framework for the data collection**

Ezzy (2002) has asserted that 'simultaneous data collection and data analysis strengthen the inductive methods of research as it builds theory and interpretations from the perspective of the participants, allowing the analysis to be shaped by the participants' (2002, p. 61). The application of Anderson & Heer's (1999) layers of validity provided the framework for validity in the research. These theories also reflected the nature of empirical phenomenology as previously described by Moustakas (1994). The layers of validity are applied via a triangulation of the data collection, by firstly conducting an informal questionnaire and collecting school based data, then taking photographs of classroom practice, and finally conducting interviews about the photographs. Procedures of observation were used throughout the triangulation, a process which linked the units of critical information, to the case writing. In short, the initial data collection and analysis leads to constructing case writing to capture a generalized experience which provides new data for verification. This data then lead to analysis in the form of six emerging main themes which revealed the context of new teaching strategies, challenges and successes faced when introducing new pedagogies and whether or not a middle years classroom could support creativity. These themes create the findings which are contrasted with the literature to inform a final theorized interpretative case.

## **Descriptive questionnaire**

The initial collection of school based data sought to understand the general context of the participating classroom environment. First, school based data from the school charter, unit planners and basic demographics of the school were collected. Lachat (2002) explains that there are three primary categories which schools can use to collect data, which are related to demographics, education/program, and performance. Johnson (2002) also suggests that the power of this type of

data for school based research is as a lever in changing conditions and practices that act as barriers to equitable student achievement.

In seeking to clarify the perceptions about the general context of the school setting and participants, a descriptive open-ended questionnaire with targeted questions relating to the principal and teacher were completed. Open-ended questions allow respondents to include more information, including feelings, attitudes and understanding of the subject and allows researchers to better access the respondents' true feelings on an issue (MacElroy, Mikucki & McDowell, 2002; Moustakas, 1994). The questionnaire used in this research consisted of a total of 17 questions and statements seeking to describe and explain the following the pedagogy practiced at the school, the demographics of the whole school community, and the school's decision making processes:

- 1) In viewing the School charter, could you offer some clarification on the following areas if possible? PRIORITY: Increased teacher expectations of student performance including the identification of 'at risk' students and monitoring gender groupings. It seems that this is achieved by improved student results in text reading P-2. Improved student results in State curriculum assessments and State wide testing and like school benchmarks.
- 2) How does the school community affect or influence curriculum and classroom practice? What were the parent's expectations for their children's education, do you think?
- 3) Did you only assess the product of student learning? Why/Why not/How? And how were these assessment measures communicated to students?
- 4) As a new member of staff to the school, at the time, how did you view the school upon your employment, and what were the initial changes to the school that you had planned to implement?

- 5) How was your professional knowledge and expertise acknowledged and used by your peers, especially with reference to team/unit planning, support etc?
- 6) As a new principal to the school, at the time, how did you view the school upon your employ, and what were the initial changes to the school that you had planned to implement?’
- 7) Why was Chris employed at your school?
- 8) Were there any changes/improvements/influences that you had envisaged for Chris to bring to Farwest PS?
- 9) How does the school manage balancing promotion of the school, involving the school community and meeting student learning needs?
- 10) How would you describe the management strategies of decision making with regard to curriculum policy in the 5/6 area at that time.
- 11) What types of pedagogy are practiced at Farwest PS? Is there a unified vision?
- 12) How are these measures/ strategies reflective of how teachers are expected to increase their expectations of student outcomes? What are teachers’ measures on how to develop curriculum that achieves student’s performance?
- 13) There is a focus on the product of learning in this priority (as well as most other learning priorities), how does this reflect the catering to ‘individual learning’ and the improvement of ‘social contexts’, if the school’s priorities are to reflect standardised result?
- 14) Do you think that the approaches to pedagogy, as can be inferred from this document, standardise the staff expectations and practices of learning and teaching?
- 15) How does the school community affect or influence curriculum and classroom practice? What the parent’s expectations for their children’s education, do you

think?

- 16) I would like to enquire about another priority, how are the high standards of learning being met? PRIORITY: The school develops high standards of learning by encouraging inquiring minds and sound communication skills. Team planning between our enthusiastic, dedicated and experienced staff members, professional development programs for staff and parents, regular program evaluation and a shared expectation of high standards and educational excellence contribute to the maximising of student potential.
- 17) How are student's inquiring minds catered for, when there is little evidence of explicit strategies in policy or the units of work provided by the 5/6 team? If this is a priority, how is this evaluated, and does this strategy help your students achieve the desired standards?

The questionnaire was open ended and had no limits to length of response and no guiding comments. The two participants were presented a copy of these questions via email, to which they added their responses and returned the completed questionnaire to the researcher. This questionnaire enabled the two participants to consider the responses in more depth during the writing process and transform extant and earlier understandings into something more sophisticated, if desired (Bereiter & Scardamalia, 1987). The findings from this questionnaire and school based data provided supporting evidence to the information from the transcripts and cases and framed the interpretive case findings for the context of the school which is elaborated in Chapter 5.

### **Photography**

Photography in qualitative research facilitated the collection of additional data to reflect emerging substantive issues in the research (Kanstrup, 2002; Banks & Morphy, 1997; Hitchcock & Hughes,

1995; Walker, 1978). The use of photographs enabled the participants to explore perspectives and meaning, and for the photographs to be viewed within the context in which they were taken (Kanstrup, 2002; Prosser, 1998; Banks & Morphy, 1997; Naylor & Coplin, 1996; Walker, 1978). Kanstrup (2002) used the digital images displayed on a laptop computer as a way of prompting teachers' discussion about their work practices. However, Kanstrup (2002) found that 'the teachers went beyond rather than into the photographs' (2002, p. 5). The photographs prompted discussions and creative thinking about teachers' experiences, leading Kanstrup to conclude that photos were an effective method of stimulating questions and data which came from the participants, rather than being constructed and driven solely by the researcher. The use of digital photography for this research provided a visual case of, or window, into classroom practice. It presented the teacher and students at work, indicating where possible the processes and outcomes of learning and engagement as they occurred. This process enabled the participants to reveal the phenomena as they were experienced, such as those challenges faced by the classroom teacher when implementing innovative pedagogies. The students who participated in this research working in groups, or were organized on one table space or one area of the classroom, so as to avoid photographing students who were not participating in the data collection.

## **Interviews**

Interviews are a valuable tool in phenomenological research. Van Manen (2011) argues the benefit of interviews in phenomenology is that they allow participants to reflect on the text, or in this research, photographs, or of previous interviews in order to gather maximum interpretive insight to the experience. Then, both interviewer and interviewee collaborate to understand the significance of preliminary themes in the light of the original phenomenological question to reveal deeper insights and understandings (<http://www.phenomenologyonline.com/inquiry/methods->

procedures/reflective-methods/hermeneutic-interview-reflection). For this research, the photographed images of classroom practice were used to stimulate those conversations and discussion to be taped and later transcribed. The students were interviewed in two small mixed groups of boys and girls, so as not to cause too much disruption to the teacher's classroom program; to increase students' opportunity to voice their comments; and to be accommodating to school interruptions such as sports activities and absences. Semi-formal questions guided reflections of photographs to describe practice:

- What do you see in the photos?
- What can you tell me about your learning by looking at these photos?
- What can you tell me about what you (teacher/students) are doing by looking at these photos?
- What do you think about this?

These questions were informally followed up with:

- What makes you say that?
- How do you know?
- What are your reasons for saying that?

Some questions for interpreting practice included:

- What does this say about your teaching?
- What does this say about your learning?

The photographs and interviews were undertaken June- August 2004. Relevant parts of the transcripts were signposted and categorised to expose the themes of the data, and each line of data was labelled with a number code to identify where the references would come from when used in

the case writing, for example: Commentary 1, L14S1, SC1 was Commentary 1, Line 14, Session 1, Student Commentaries Group 1.

### **Writing descriptive cases**

Case writing was used in this study to represent the practices, environmental context and experiences of this middle years classroom. Cherednichenko, Davies, Kruger & O'Rourke (2001) and Mertens (1998) described cases as the object of the study which were contextually and locally situated. Case writing for this research, described a complex instance, including the thoughts and feelings and the exploration of the phenomena of the teaching and learning environment. They were obtained by extensive descriptions and analysis of that instance via transcribed tape recordings. The transcripts were analysed to identify propositions that related to this study's research foci. Smyth and Shacklock (1998) explained that by

Examining the linguistic nature of what teachers do tells us much about what they regard as important, as well as how they explicitly and implicitly construct and frame their work. The reason linguistic forms are so important in teaching is that they are the means through which teachers foster 'creativity' and handle expressions of 'resistance' from students (1998, p. 90).

According to Allen 'the quality of interpretation is to recognise its complexity as discursive practices, and the power relations which weave a social, historical and cultural web of understanding' (2000, p. 17). In this research, units of analysis were nominated from the identified propositions and written into cases, including the areas of: teaching and learning environment, relationships between students and students, teacher and students, the curriculum, demographics of classroom and teacher background and pedagogy. These factors were scaffolded into three qualities that reflected the development of a practice into theory discourse:

- Practice described: richly describes the teaching and learning situation.
- Practice interpreted: developing the understanding of the teaching and learning experience.
- Practice theorised: a demonstration of the development of personal explanations and theories of teaching and learning (Cherednichenko, Davies, Kruger & O'Rourke, 2001).

The following questions were used to support the conceptual and analytical framework for the research. These questions included:

- What are the teaching practices and innovative strategies in the middle years that tend to foster or reflect creativity?
- How do teachers understand their own practices?
- What methods of practice do teachers employ to develop authentic learning environments?
- How do teachers understand the learning product of innovative approaches to teaching?
- How are alternative approaches to teaching related to creativity development for learners?
- Which characteristics of creativity from Table 1: *originality, elegance of problem solving, self-identity and autonomy (self-consciousness), risk taking, and flexibility*, if any, are present in everyday classrooms and curriculum?
- What are the different meanings attached to creativity and authenticity in education and how are such meanings related to teaching practice, learning and assessment in the middle years of schooling?
- In what ways do students respond to innovative and or creative teaching approaches?
- How do teachers create learning environments which support the development of new pedagogies? What factors affect this?

Initially, the ideal characteristics of creativity from Table 1 (pp. 37 - 38) were used to identify the units of information from the questionnaire and transcripts that were relevant to experiences of teaching and learning outcomes like creativity. Then, data extraneous to Table 1 (pp. 37 - 38) were identified from the transcripts and questionnaire that related to authentic teaching and where possible, creative teaching and learning outcomes for the middle years as discussed in the literature review. Once the units of practice and perceptions about creativity and learning were categorised from the transcripts, this data was used to form general themes for eight analytical cases. For example, those influences and restrictions of standards based curriculum, collaboration with peers and the influence of parents on classroom practice. Brief summaries of each case were crafted and main points were derived to be applied to the analysis process for generating six emerging main themes.

### **Generating case findings into six emerging main themes**

The use of eight descriptive cases presented coherent accounts of change, practice, and enabled bundling of educational elements, which formed the basis of findings and themes. Moustakas (1994) explains that these descriptions form the basis for reflective structural analysis of the participants' experiences in empirical phenomenology. Therefore the next stage of the analysis was to become critical about those findings and look for specific instances and examples which supported claims about teaching and learning for creativity and innovation, thinking, students' needs and interests and collaborative processes. These findings were analysed against the research questions and the main points from the eight cases. This process generated the findings that revealed six emerging main themes of relevance in Chapter 4, and reflected insights about the challenges or progression when applying new pedagogies in this Year 5/6 classroom. These methods of simultaneous data collection and analysis reflect Ezzy's (2002) contention for strengthening the methodology and theory constructed from the experiences of the participants.

Before the cases and themes were used to frame the interpretive case writing, they were returned to the participants for validation.

### **Respondent validation of cases and themes**

The cases and themes were returned to students, teacher and principal as applicable for validation. This validation process identified any further findings of trends, implications, emerging patterns, inconsistencies and interpretations (Cherednichenko, Davies, Kruger & O'Rourke, 2001; Kruger, Cherednichenko, Hooley & Moore, 2001). As well, the validation process was facilitated by the participants' evaluations, based on the following semi-formal questions:

- 1) Have I described your practice/ learning correctly?
- 2) What do we understand by what we term creativity?
- 3) Has your thinking changed about the way you learn/teach/interact with others in groups to be creative?

The researcher recognized that the students would have difficulty in reading the cases and in providing validation of the findings. Therefore the researcher informed the students by a verbal summary of the main points of the cases as short statements. Then, students were asked questions after each statement to indicate whether that finding or description was true or not. Students provided validation for cases by writing their answers into two columns, responding with either 'yes' or 'no'. Students were also asked to list the words they thought meant or described creativity. The final question was simplified to ask whether their thinking or learning had been affected by the teacher's teaching style and activities.

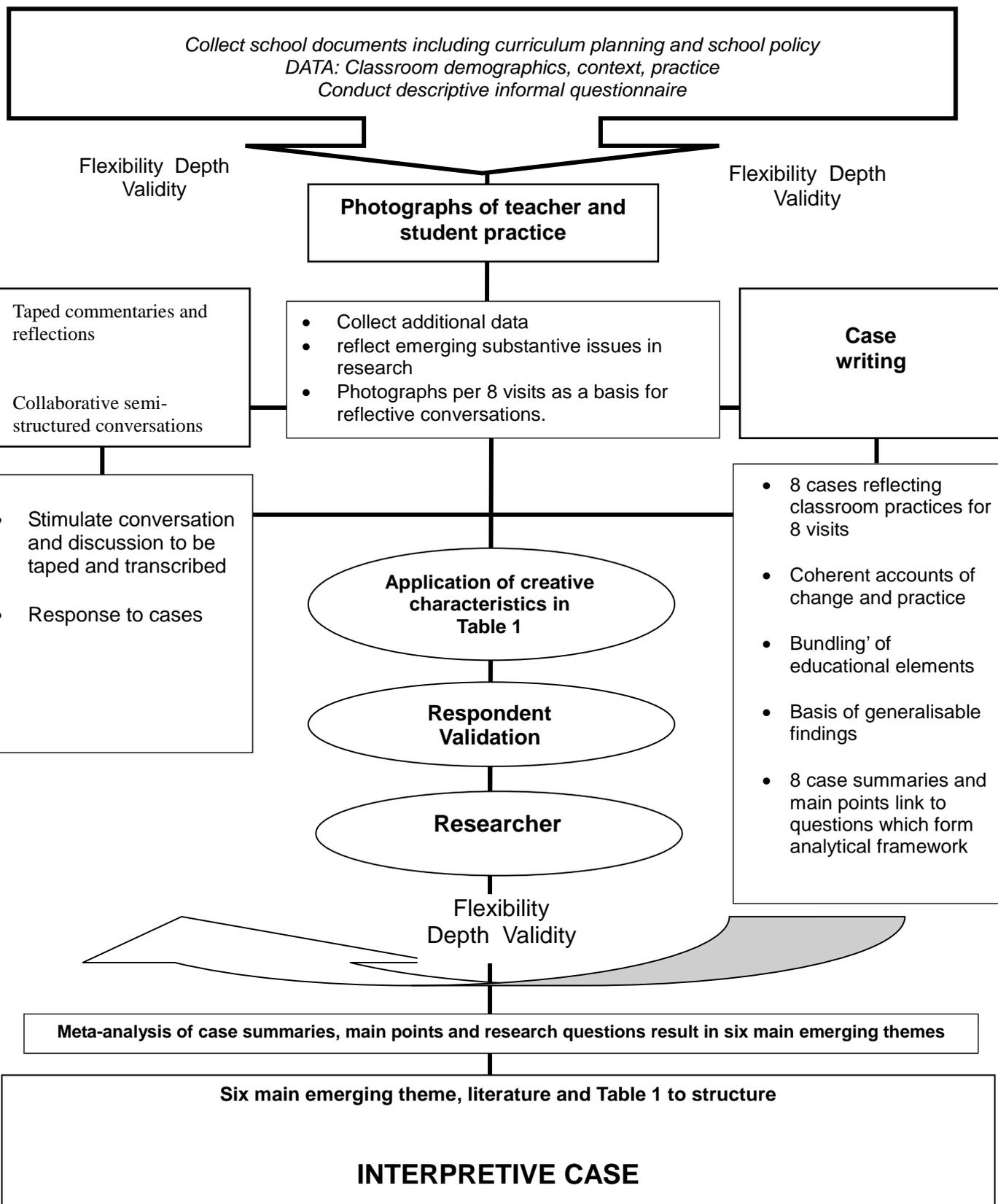
### **Presentation of the data and findings: interpretive case**

As previously outlined the six emerging main themes were correlated to the characteristics of

creativity defined in Table 1 and the literature, to form the framework for interpretation in the writing of the interpretive case. The final interpretive case study in Chapter 5, reported the investigation of pedagogical practices and outcomes of classrooms. Chapter 5 has distilled the links between creative learning, student engagement, pedagogy for creative teaching and learning in a middle years classroom context which was restricted by the mindsets, timetables and standards based curriculum constraints. It revealed the dilemmas faced by a teacher wanting to achieve improved learning outcomes, and whether those innovative practices or strategies implemented by the teacher could be further developed to support creative pedagogies, or continue to enhance learning in this environment.

### **Research summary**

The following Figure 2 (p. 87) is a flow chart summary of the data collection and analysis processes used for this research. The chart begins with the initial data collection of school documents and informal questionnaire to set the classroom and school context. The procedure then flows to a triangulation of methods including photographing classroom samples, transcribing taped commentaries about what was interpreted from the photos by the participants, and lastly the case writing. This process provides flexibility and validation of the empirical phenomenology method employed and the data collected for analysis. The data collection then proceeds to the application of Table 1 to the data, validation from the participants, and finally to the researcher forming the six emerging main themes and final interpretive case. The arrow at the bottom of the chart represents the flexible cycle whereby the data and analyses are in a process of reconstructing and deconstructing understandings of the meaning attached to the data analysis and interpretation.



**Figure 2: Flow chart summary of the data collection and analysis processes used for this research**

## *Research Benefits*

The benefits of this research included:

- Discussion on learning strategies, pedagogy and assessment in paradigms which teachers and students use as they deal with unpredictability in learning and its relationship to current education policy, as this was largely absent in current literature.
- Contributing new knowledge about the nature of learning and practice via examination of one teacher's practice and its relationship to policy. The new knowledge would attempt to address the notion that some students in the middle years appear to be disaffected, unchallenged and disengaged from learning and school routine. While the literature provides many arguments for improved learning qualities such as creative learning or innovative practices, they do not explicitly deal with the notion of the type of learning environments, and supports schools need to improve creative learning outcomes while still engaging young people in the middle years of schooling.
- The method of data collection could assist teachers in learning about students, the programs they initiate and their teaching strategies and own reflective practice, by linking methods of communication via triangulation of this research's methodology. This process also provided a positive outcome of the students' active participation in developing reflective practice to support their own learning.
- The benefits of understanding student attitudes and experiences of schooling constituted a determined attempt by systems, the schools involved, teachers and teacher education to address the real needs of students (as opposed to student needs as perceived by teachers and in general).

### *Research risks and management*

The following points identified the potential risk and the procedures undertaken for managing the potential risks involved in this research:

- *Risk:* confidentiality of participants' identities may be threatened by recognition of specific occurrences.
- *Management:* Changing names with unisex pseudonyms in cases and transcripts. All photographs were stored on disc, to be analysed after each session with students, teachers and researcher, and not saved to any school based hard drive nor copied. In cases where confidentiality may have been threatened by recognition of specific occurrences, details were changed to prevent this. The researcher and supervisors of the researcher were responsible for the security of the data; they were the only people with direct access to the data which is being held for a period of 5 years after they were collected.
- *Risk:* Psychological distress for participants due to possible issues arising which related to student engagement with school and family such as harassment, bullying and abuse. This research was thought likely to involve the discussion of issues which reflect educational risks for students and teacher such as awareness of learning difficulties. While unlikely, this research may have touched on issues such as harassment in the classroom and other classroom management issues with relation to students and teacher. The discussion of issues by students and teacher relating to school, and their own learning ability and student/teacher and student/student relationship may have raised broader questions for students which reflected social risks regarding their relationships with others in their class. Some students and the teacher may have felt uncomfortable in discussing the practices of peers, themselves in group work and activities in the classroom.
- *Management:* Through negotiation and consultation with the school principal, support

from teachers, school administration, parents and school based counseling services would be organised for groups and individuals as required. Risks were minimized by obtaining:

- Permission from Principal, Teacher, Parents of student, student.
- Ethics Approval of the DEET and Victoria University Ethics Committee.
- Ensuring school has updated copy of the researcher's current police check and Victorian Institute of Teaching Registration for working with students.
- Participating school having a clear policy for taking photographs of all students prior to the commencement of the research. It was important to consider the objectivity of photo evidence, access and confidentiality of visual and decoded information to ensure that there was no manipulation of relevant information.
- Students and teacher were able to cease participation in the research at any time.
- Access to a support team involving both school and external counseling services was organised for individuals as required. The collaborative nature of the research and in particular the opportunities for reflecting on case writing may have also assisted in minimising potential risks.

#### *Limitations and strengths of the research methodology*

##### *Strengths*

- Phenomenology as the research methodology was expected by the researcher to develop more depth to the data findings than the results of a survey. This approach created data that could be validated by the participants with relative ease, and could be used to produce eight cases and deeper meta-analyses which would contribute to the writing of the final case.

- Digital photography as a method for data collection provided participants with pictorial accounts of what actually happened during that session, so as to stimulate conversations directly after the experience and just prior to the interview. This served to stimulate a recount of what happened visually as close as possible to the time after the event took place, so that recollections of what took place were less likely to be distorted by time. Also, this method was more helpful for the participants, as opposed to using cold interviews where verbal responses may or may not match what the respondents actually did during that class. In contrast, surveys generally provide far less data or stimulation for responses.
- Another advantage was that the semi-structured interview was a flexible way of collecting data. As new insights were gained the researcher could shift perspective quickly, using the photos as an aid to explore new areas of inquiry as they occurred. This technique was important for working with small groups of participants in group situations. This is not possible with most surveys, as once questions are set, all are asked in the same way for all respondents. With available data, the researcher has limited choice with the data at hand.
- Cases and small groups discussions (as in this single classroom or participants) shared these strengths of providing flexibility for the data collection. The eight cases provided descriptions of actions and direct quotes from the participants. The main findings and themes from these cases were bundled, and then organised into six meta-analyses. This process enabled the researcher to connect the research analysis with the main elements of the literature review as summarised in Table 1 (pp. 37 – 38).
- The small sample group had unique strengths as well. This method provided a fast, inexpensive way to obtain what was hoped by the researcher would provide a concentrated, rich body of information on the topic. Each group was organized quickly

and in a ready environment like a classroom. During sessions the researcher could probe to clarify issues or to get into the deeper meaning behind comments as they occurred, and further inquiries could be made in the following sessions over the time of the data collections. The open, flexible nature of focus groups also encouraged participants to talk about topics and was effective to use with children of varying degrees of literacy, though the validation process had to be modified.

- The strength of the triangulation methods for obtaining data, addressed the issue of internal validity as it used more than one method of data collection to answer the research questions to provide more generalisable claims. This broader view was achieved by using a phenomenological approach including: taped commentaries, reflections, collaborative semi- structured conversations; Photographs of teacher and student practice; and case writing.
- Respondent validation offered the researcher the ability to work with the participants on an ongoing basis in order to facilitate clarification of intent and interpretation of the data. The discursive nature of this method provided the opportunities for clarity as opposed to using a survey. It also limited the possibility of bias in how observations were made, recorded, analysed, and interpreted. Barbour (2001) has acknowledged that the cross checking of respondents' or participants' reactions to emerging findings could help refine explanations.

### *Limitations*

- The use of a single school classroom as the basis for this research provided a case study but limited the generalisability of the research findings. A single case study produced a restricted level of data. Despite the richness of data a single in-depth case study can generate, its findings are applicable only to the context of the case. However, the

researcher sought to manage this limitation by applying a collection of data over 8 sessions so as to build a more detailed account of classroom practice over time.

- The use of a single classroom was intended to build a better rapport with the participants. While this classroom had 26 students, not all students were permitted by their parents to participate in the study.
- A limited number of participants could result in bias by the researcher making it difficult to generalize findings.
- Taking photographs of classroom behaviours and then conducting interviews, and respondent validation processes can cause disturbance to the classroom program. Students who participated in the study were photographed in groups, as discussed on page 80.
- A major limitation of transcribing commentaries was the amount of time, quality of recording, quality of what was said on behalf of the participants', and the researcher's skill and knowledge required to record, codify and analyse transcripts accurately and completely. For example when a group of participants was participating in a discussion, all of their responses could happen very quickly and overlap, as part of complex interaction among a number of participants. Also, transcribing language would not enable the researcher to see body language to help enrich or clarify data. Rather the researcher had to rely on listening for intonation and other modes of speech to develop any further understandings. Inexperienced transcribers could miss part of the interaction or fail to record the action accurately.
- Respondent or participant validation as discussed by Barbour (2001) and Mays & Pope (2000) had aided in clarifying explanations of the participants, however researchers could often use this method to provide an overview of understandings, whereas if participants have individual concerns, there could be a discrepancy of accounts. There could also be a

possibility of collusion through a 'romanticising' of participants' accounts during validation. In addition, the method of seeking validations could make considerable demands on their time. Some participants may even find the content of the findings distressing or exploitative (Barbour, 2001; Atkinson, 1997).

- Triangulation of methods could be difficult to conduct properly. Barbour (2001) has explained that data collected using different methods to form a triangulation of data could come in different forms and defy direct comparison, particularly in interview and focus group transcripts. Barbour (2001) also argued that when similar findings were revealed from different methods employed by triangulation, the results were only a corroboration, and the 'absence of similar findings does not, however, provide grounds for refutation. This is because different methods used in qualitative research furnish parallel data sets, each affording only a partial view of the whole picture' (2001, p. 1117).
- While the initial reasons for selecting the participating classroom initially met the expectations of the researcher, as the findings of the research were divulged, the classroom at hand, may not have met those expectations to successfully answer the research questions. This may have been due, in part, to misinterpretations about creative practices by the principal, who nominated the teacher for participation in the research.

## **Conclusion**

This research applied phenomenological research methods to examine one teacher's practices with the aims of:

- Providing new knowledge which addressed the distinct gap between policy and research about the possible place of creative learning strategies to improve student learning and engagement in a middle years classroom.
- Revealing the strategies and approaches a teacher uses to engage students in curriculum

and the classroom environment necessary to support those changes.

- Revealing the elements of teaching and learning that could support creative learning within the constraints of school systems and standards based curriculum.

For this research, methods included case writing based on findings from group discussions, and photographs of teacher and student practice formed the triangulated basis of the data collection.

These findings were analysed by reflecting on the characteristics of creativity from Table 1 in the literature review. A meta-analysis revealed six emerging main themes which were significant to understanding the context and applications of creative pedagogies in this middle years classroom.

These six points became the tool for an interpretive case study in order to map and document the experiences of this one class over the time of the research. Chapter 4 presents examples of how the findings were developed and established to inform the final theorised case writing of Chapter 5.

Chapter 6 presents the conclusions and final discussion about the research, and suggested strategies for teachers, like the one in this study, to establish an environment supportive of creative pedagogic strategies in the middle years of schooling.

## CHAPTER 4

### FINDINGS

This research seeks to understand how a teacher attempts to introduce innovative practices to an everyday classroom in the middle years of schooling. This Chapter explains and demonstrates the processes applied to the data collection, analysis, interpretation and findings of this research, which are established by empirical phenomenological methods. These phenomenological methods seek to develop understanding of the students' and their teacher's experiences in their classroom at Farwest Primary School, as described in the literature by Moustakas (1994). These explanations demonstrate how the connections between the data, literature, themes and findings were made, at each stage of the data collection, and layers of analysis.

First, this Chapter summarises those research procedures and questions which structure the methodology for data collection. Next is a detailed explanation of how the data was collected to establish the context of the school and classroom, as well as generate perceptions about the teacher's innovative teaching and learning and evidence of creativity from the raw data. These processes reflected the structures of empirical phenomenology (Moustakas, 1994) and layers of validity for the methodology and data collection (Anderson & Heers, 1999). This is followed by a detailed explanation of how the data was analysed and interpreted to craft the eight cases and case summaries, and how the respondent validation process was carried out. Then, there is an explanation of how the six emerging themes were created, and how they structured the writing of the interpretive case. Lastly, an explanation of how the interpretive case is crafted to link the findings from the six emerging themes to relevant literature, the idealized characteristics of creativity in Table 1 (pp. 37 - 38) and the research questions.

## **Research procedures**

In short, the research procedures comprise three stages:

### *Data collection:*

- collection of school based data;
- a descriptive informal questionnaire;
- photographs of practice to stimulate conversations of the eight sample visits;
- taped conversations about the photos with the participants; and
- transcriptions of these conversations.

### *Data analysis*

- application of Table 1 (pp. 37 - 38) to derive main themes;
- writing of eight descriptive cases illustrating the main themes in practice;
- case summaries and main points which also link to the questions that form the analytical framework; and
- validation of the themes with participants.

### *Generation of findings*

- meta-analysis of the case summaries and main points and the research questions to reveal six emerging themes.
- an interpretive case in a coherent explanation of the described practices, and analytical points by reference to the framework presented in Table 1 (pp. 37 - 38).

The eight cases of data present the participants' perceptions and experiences of the teaching and learning environment. Together, the cases illuminate the phenomena of those experiences associated with elements of creative learning, collaboration and student engagement and those issues which arise when implementing new pedagogies in middle schooling. The cases are summarized to derive main points which are then returned to the participants for validation. These main points and the research questions below are used as the first layer of analysis to reveal emerging themes.

*Research questions:*

- What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?
- What methods of creative practices or strategies are identified or supported in a regular classroom?
- Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of an everyday classroom and curriculum conditions?
- What are the challenges faced by a teacher when introducing creative approaches to authentic learning, change and innovation into the classroom?
- Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?

These phenomena point to a set of findings that are grouped into six emerging themes of analysis which in general summarise the pedagogic aspects of creative learning; dilemmas and strategies for

implementing change; and possible conditions and strategies for creative pedagogies in middle years classrooms. The six emerging themes then form the structure and themes for analysis and discussion, resulting in the interpretive case of Chapter 5.

**Data collection: to understand the classroom and school culture and generate perceptions about innovative teaching and learning for creativity.**

#### *Understanding the context of the school and classroom*

This section explains the development of the data collection methods based on empirical phenomenology, including their implications and contributions to the analytical processes used to construct the cases. One of the initial aims of the data collection was to understand the context of the participating teaching and learning environment. These data guided the analyses and highlighted those contextual understandings which reflected the school culture and general attitudes to innovation and change. It also revealed any classroom practices or experiences which were in common with the characteristics of creativity in Table 1 (pp. 37 – 38).

A classroom at Farwest PS was selected for the research following after an invitation to a selection of 10 principals in the Western Melbourne region, based on the researcher's networks. Chris, the classroom teacher was highly recommended by Principal Jones as she was employed to enhance students' engagement and creative learning and to lead the enhancement of teacher performance through implementing innovative practices. The innovative practices which Chris employed were perceived by the researcher, at the initial stages of the research, to relate to approaches to creative pedagogies and innovative learning practices. The data collection for this

research was undertaken in June- August 2004. The education environment in Victoria at this time consisted of statewide testing called the Achievement Improvement Monitor (AIM) program. This was a testing scheme which started in 2003, and was used to monitor the development of literacy and numeracy skills of Victorian school students in Years 3, 5, 7 and 9. The testing proved controversial among many educators and school communities as assessment of this nature was argued by Hartley (2006) and Prosser (2006) to lead to centralized education which would undermine innovation, de skill teachers while increasing higher accountability on their teaching outcomes, and not allow for pupil diversity and the specific needs of different demographics. The curriculum practiced was the Curriculum and Standards Framework (CSFII) which was going through a transition into Victorian Essential Learning Standards (VELS). This transition of curriculum was in response to the Blueprint for Government Schools (2003) which made recommendations for the development of 'essential learnings' in an approach to reduce the crowded curriculum of the CSFII, and increase the depth of curriculum to concentrate on complex learning (VCAA, 2004).

#### *Application of the qualitative method: empirical phenomenology*

This section explains how the methods of empirical phenomenology described by Moustakas (1994) and Anderson & Heer's (1999) layers of validity, are applied to the data collection. The qualitative method used to collect the initial data reflects Ezzy's (2002) and Johnson's (2002) contention of the power of using school based data for theory building. To inform this research, this process involved collecting and interpreting school based details from the school charter, unit planners and the basic demographics of the school. Then, the evidence of innovative teaching strategies, the application or presence of authentic learning and teaching (and possible indicators for creativity), collaborative planning and learning, pedagogic philosophies, restrictions and limitations of curriculum, staff and parent influences on learning were identified. The documents were analysed against the questions

that support the analytical framework as explained in Chapter 3 (p. 70).

*Questions from the conceptual analysis:*

- What are the teaching practices and innovative strategies in the middle years that tend to foster or reflect creativity?
- How does a teacher understand his/her own practices?
- What methods of practice does a teacher employ to develop authentic learning environments?
- How does a teacher understand the learning product of innovative approaches to teaching?
- How are alternative approaches to teaching related to creativity development for learners?
- Which characteristics of creativity from Table 1 (pp. 37 – 38): *originality, elegance of problem solving, self-identity and autonomy (self-consciousness), risk taking, and flexibility*, if any, are present in an everyday classroom and curriculum?
- What are the different meanings attached to creativity and authenticity in education and how are such meanings related to teaching practice, learning and assessment in the middle years of schooling?
- In what ways do students respond to innovative and or creative teaching approaches?
- How does a teacher create learning environments which support the development of new pedagogies? What factors affect this process?

Next, a brief and informal questionnaire (pp. 76 - 77) was completed by the principal and classroom teacher to obtain their perceptions of the pedagogic context presented in the school charter and any evidence of the presence of creative learning practices. The questionnaire consisted of 17 questions

which sought to clarify the pedagogy practices at Farwest PS, the demographics of the whole school community, and the decision making processes within the school. There were no limits on length of responses to the questions, and no guiding comments. The questionnaire gave the participants more time to consider meaningful responses with regard to choices for planning teaching and learning experiences, impact of other staff and school community on practice (Informal Questionnaire 1 and 2, June & August 2004), supporting the processes described by MacElroy, Mikucki & McDowell (2002) and Moustakas (1994). For example, Principal Jones described the context of school:

‘As a new principal to the school, at the time, how did you view the school upon your employment, and what were the initial changes to the school that you had planned to implement?’

- school run down in physical appearance;
- a lot of teachers who been at the school for a long time were resistant to change; and
- many processes from a management point of view needed to be put into place,’ (Interview 16/06/2005).

‘Were there any changes/improvements/influences that you had envisaged for [Chris] to bring to [Far West PS]?’

- quality in schools processes;
- [Chris] knowledge and experiences in innovative teaching practices; and
- broad curriculum knowledge,’ (Interview 16/06/2005).

Essentially the questionnaire provided supporting evidence to the information from the transcripts and assisted in substantiating the analysis later used to form the categories for the eight cases. After analysing the school based data materials, observing and taping the first few classes, and conducting

the interviews following those learning experiences, it became apparent to the researcher that the school based data was not consistent with the pedagogic practices in Chris' classroom. It was clear from the results of this research that it was difficult for Chris to implement new or innovative practices in this middle years classroom. The terms creativity and creative pedagogies were interpreted by both Chris and the Principal to mean innovation and change which probably explains why Principal Jones believed Chris would be best recommended for this study. While these perceptions were not an accurate reflection of the ideals of creativity in Table 1 (pp. 37 - 38), it was clear that both Chris and the Principal valued more authentic strategies and saw change as a creative process.

#### *Practice described from photos and interviews*

The next phenomenological method employed for this research involved taking photographs of practice of eight classroom sessions that were 45 minutes in duration. This was the second element reflecting Anderson and Heer's (1999) layers of validity. The photo images were taken digitally during the sessions, and then uploaded to a computer after each lesson. The students and Chris were shown the photos during the interviews which were conducted shortly after the class, and aimed to stimulate the participants' recall and to aid their reflection. Chris was interviewed at the end of the school day, due to classroom commitments. The students were interviewed by using the semi-formal questions given in the methodology (pp. 71-96) for two mixed groups, but not always with the same combination of students. This was due to student absences, limited quiet areas in the school available for conducting the interviews, school based activities where students were withdrawn from class and at times during the interview, and school photo day. However, it was not only the extraneous interruptions which influenced the quality of student responses, but also the students' eloquence, literacy and metacognitive capacity to explain what was happening in the photos.

A clear example of this occurred after the first photo session when students were asked about their learning environment, based on that lesson. Initially when asked to describe what students saw in the photos, they described learning activities as 'what they did,' such as when describing a unit of work on Government (completed in Term 1 with Bernie their previous classroom teacher), but with little specificity or detail:

we learnt about what Government does what...we did that limerick...we did some work on Government, some activities. We did this thing where we stick some stuff in our books (Commentary 1, L3-11S1, 2SC1).

This example was typical of the data collected from the transcripts. However, as the research continued, the next few sessions of transcripts showed a little improvement in depth of commentaries. Arguably, the main influence for this slight change was that these interviews (in the example below) were conducted after thinking tool based activities with Chris, revealing a different type of discourse:

Researcher: When do you use the 6 thinking hats in your classwork?

Jamie: Uhm...mainly when we do work- you know, stuff like that. When you're writing or you need help, and stuff like that.

Lee: When we first got the thinking hats...well if you had one of these hats on, like imagine what it looks like. When you have the black hat on you can judge when things are bad (Commentary 1, L63-68S1, 2SC).

Researcher: Can you tell me what Boris stands for?

Lee: Brain Origami Related to Irrelevant Situations.

Casey: Sometimes, like if [Chris] asks you a question, such as... like what makes your (inaudible) the colour white? You can't and you might have a stupid explanation, but it makes you come up why and a reason why.

Researcher: Yep and why is it important to know why?

Casey: Because you can't just come up with a stupid answer and just leave it! 'Cos you need to know why, otherwise you'll be like... why is it white and why do you like snow peas (Commentary 1, L130-137S1, 2SC).

Here, the students were starting to show a little more understanding of the activities taught, and some awareness of their applications when using de Bono's thinking hats, and thinking tools such as BORIS. Such examples began to provide somewhat more detailed and relevant experiences in the data analysis.

### **Data analysis: Crafting the cases and case summaries**

#### *Application of Table 1 to derive main themes*

The idealised characteristics of creativity in Table 1 (pp. 37 - 38) were applied to the questionnaire responses and transcripts to reveal main themes embedded in the perceptions and understandings demonstrated by the participants. These data signified the possible conditions and values supportive of creative pedagogies as well as the possible conditions for establishing innovative practices in standards based curriculum. The following example was drawn from an interview with a student named Kim, and showed how the idealised characteristics of creativity in Table 1 were applied to the data to show the relevant themes collated in Case 4 (Appendix 4, p. 243) and which research questions were met. These themes include Chris' and the students' perceptions of what define creative learning, and whether or not students participate in creative practice in this classroom. Kim commented that a maths activity could be

creative because you get to draw how you feel and what it's like, what the differences say...And it was thinking, because you really do have to think about what you write and draw (Commentary 3, L96-99S5, 6SC1).

Chris' approaches to teaching maths in this instance were seen to be 'creative,' and in later commentaries (Case 4, Appendix 4, p. 243) as fun and imagination provoking. The commonality between these students' descriptions of creativity and their renewed engagement for learning was that they reflected some of the ideal characteristics of creativity in Table 1 (pp. 37 – 38). This indicated that some of the elements of creativity could be further developed in this classroom including:

- Flexibility: the students remained open to novelty when solving the maths problems making them less inhibited to try different approaches.
- Originality: students attempted to maintain sensitivity to solving maths problems by accepting the uncommonness of answers, particularly when problem solving.
- Effectiveness and relevance: students commented that traditional domains for maths solutions were applied in integrated studies in creative ways making learning more relevant and interesting.
- Non conformity: students acted in non-conforming ways perhaps from working collaboratively or by remaining open to novelty during the integrated maths activity.

The main research question which was reflected in these data was 'What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?' It seemed that there were some indicators of Chris' approaches to curriculum and pedagogy which could support elements of creative practice. For instance, Chris promoted elegance in problem solving as she urged the students to adopt a process of problem solving for an idea or solution that is productive, valuable and worthwhile; qualities also hinted at by the students as described in Case 4.

*Categorising data for the cases*

The transcriptions of the taped conversations provided the data to be categorised for the cases.

These data explored the students and Chris' thoughts, feelings and perceptions of the teaching and learning environment. They revealed Chris' understandings about quality learning and strategies including those which might be related to creativity and the questions from the analytical framework. At times, it was challenging to make the analytical links from the commentaries due to the spread of information across all the transcripts. As previously described in Chapter 3, relevant parts of the transcripts were signposted and categorised to expose the themes of the data, and each line of data was labelled with a number code to identify where the references would come from when used in the case writing, for example: Commentary 1, L14S1, SC1 was Commentary 1, Line 14, Session 1, Student Commentaries Group 1. It was important to look for signposts in the information as they appeared, and then to bundle the signposts thematically from the spread of data across the interviews, to bring clarity and order to the findings.

This section showed how the categorisation process was applied to the commentaries taken from four samples: A, B, C and D. Each sample was based on a random classroom session, for example responses in Sample A were obtained after a thinking tool based maths class. Samples B and C were derived from students' commentaries after different classroom sessions, and Sample D was taken from one of Chris' commentaries transcribed after a literacy session. In these four samples the following processes were demonstrated:

- How the spread of signposts were tagged as relevant units of information across eight lessons.
- How these signposts were bundled to form one theme.
- How these signposts connected to the questions which supported the analytical framework.

- Whether these data related to the idealised characteristics of creativity in Table 1, and to what degree.
- How these themes were written into a case.

Within Samples A, B, C and D the researcher made signposted units of data representing a main theme about perceptions of creativity. These signposts were identified with an underline for the purpose of this demonstration. Next, these signpost units of data were bundled and categorised into themes described in the researcher's interpretations. These interpretations of the raw data specifically revealed the participants' perceptions of possible creative learning, and whether creativity or creative strategies were evident in this classroom by making connections to the questions in the analytical framework; these data will contribute to the development of new knowledge to address the gap between research and policy about these strategies as described in Chapter 3. Lastly a question was formed concerning the teacher's and students' perceptions of creativity, and its presence in the classroom for the data findings in Case 4: *How could creativity be supported in this learning environment?*

**Sample A** (Spread: Student commentaries after participating in thinking based mathematics lesson)

Researcher: Do you find that you get to come up with your own, like if you - do you both like maths?

Alex: uh..not really.

Kim: Yeah, it's all right.

Researcher: its okay?

Kim: Mm okay, it would be more fun if we got to draw.

Researcher: What would make maths more fun for you?

Kim: More creative activities.

Researcher: alright, what type of activities could you come up with, or what activities make maths more...?

Kim: Games (Commentary 4, L35, S7, 8, SC1,2).

### *Researcher's Interpretations:*

Relevant question from conceptual analysis:

- How are alternative approaches to teaching related to creativity development for learners?
- What are the different meanings attached to creativity and authenticity in education and how are such meanings related to teaching practice, learning and assessment in the middle years of schooling?
- In what ways do students respond to innovative and or creative teaching approaches?
- Which characteristics of creativity are present in everyday classrooms and curriculum (as shown in Table 1: *originality, elegance of problem solving, self-identity and autonomy (self-consciousness), risk taking, and flexibility*)?

Sample A revealed the theme about students' perceptions of more engaging learning activities which were perceived as more creative, indicating that creativity in maths for these students related to playing games and drawing which make it fun. These perceptions of creativity for this participant indicated to some degree the idealised characteristics of *non-conformity, effectiveness* and *relevance* in Table 1, whereby maths could be more engaging when it was interesting and involved traditional style art methods for learning, like drawing. Elements of creativity learning in this theme showed

the student wanted to engage in novelty and non-conformity to traditional schemas of maths represented by the comment that maths was more fun when it was based on games.

**Sample B** (Spread: Student commentaries after participating in a thinking tool based literacy lesson of completing a Y-chart with words and or drawings/symbols)

Lee: Oh yeah- we really never get to do arts and crafts, because [Chris] doesn't know how to do it and we've done it with Miss T once, and that was the only time we've ever done arts and crafts this year.

Researcher: Okay so what type of learning do you think is arts and crafts learning?

What words would you use to describe it?

Robyn: Creativity.

Carey: Creative.

Researcher: Okay, do you think you could do literacy activities that were arty and crafty as well?

Carey, Robyn, Morgan, Lee: Yes (all).

Researcher: And you didn't find that today's activity was arts and crafts?

Robyn: No (Commentary 3, L79-89, S5,6,SC2).

*Researcher's Interpretations:*

Relevant question from conceptual analysis:

- What are the different meanings attached to creativity and authenticity in education and how are such meanings related to teaching practice, learning and assessment in the middle years of schooling?

- In what ways do students respond to innovative and or creative teaching approaches?

Sample B revealed the theme of students' perceptions of creativity, and whether elements of creativity were present in this classroom. This group of students reported that being creative was to participate in arts and crafts activities, and that they do not do art and craft in Chris' classroom. The final comment made by Robyn, about whether the literacy session was based on arts and crafts showed an interesting response. This student described this literacy class as not creative even though it was based on problem solving style thinking tools, which involved drawing (entering their thinking and analysis into a Y-chart by using symbols, drawings or words). Drawing of this type did not appear to relate to traditional arts for this student, perhaps because of the materials used in the activity, or because the drawing was used to communicate an answer, rather than something that was novel. With reference to Table 1 (pp. 37 – 38), these comments did not conclusively support any of the indicators of creativity. However they could suggest that this student enjoyed learning that was more novel, but there was not enough evidence in this sample to support this idea. This lack of evidence also highlighted one of the issues limiting this research, by the restricted expressions students used to describe their own thinking and learning.

**Sample C** (Spread: Student commentaries after participating in a literacy lesson)

Researcher: Okay. Have you done this type of work previous to when [Chris] came to work in this classroom?

Carey: What do you mean by that?

Researcher: Well, Venn diagrams, being more creative with your work.

Robyn: We've done creative work and all that.

Morgan: We done creative writing (Commentary 2, L60-64, S3,4, S2).

*Researcher's interpretations:*

Relevant question from conceptual analysis:

- What are the different meanings attached to creativity and authenticity in education and how are such meanings related to teaching practice, learning and assessment in the middle years of schooling?
- In what ways do students respond to innovative and or creative teaching approaches?

Sample C revealed the theme of students' perceptions of creativity and whether any creativity was practised in this classroom. This example ironically showed a student's comment that narrative genre was creative because it was called creative writing. This was questioned in Case 4 (Appendix 4, p. 243), as all writing was creative because it was an act of creating thoughts and visual imagery with words. Narrative writing, to which the student was referring, was a specific genre that was fictional and was no less or more creative than non-fictional texts; however, this was how students viewed it. The students had not appeared to acknowledge that creativity or creative strategies were something new which Chris brought to this classroom environment.

**Sample D** (Spread: Teacher commentary after a literacy session)

Researcher: Can I ask you what you would see as creative practice into this classroom that you deliver? And then I'm going to ask you a question about what is the creative learning that happens in here?

Chris: Creative practice? In what context do you mean?

Researcher: The one which you, of how you present the information.

Chris: Okay.

Researcher: Do you do it in a way that is it more creative? Or do you uhm...I'm looking at it in terms of a definition of creativity in terms of practice, and what is your definition of creative learning.

Chris: I probably uhm, provide stimulus for the children, initially, to throw them into what the learning context is going to be, and relate it to their own situation. I use their own personal experiences which I find children in the middle years; you're a real person, unlike when I went to school. For instance when I have a dinner party I sit down and I get the kids to help me plan a menu, and I tell them the next day what happened. And I think that's good, I don't make it up. Whether it went good or not. I think with middle years, you realize you have issue in life, you are running a real life. I'm using probably tools or skills that I'm teaching these children. I show them how I'm using them, and I think that's probably the creative practice is would say, I don't know if that's along the lines you were talking? (Commentary 5, L63-81, S1,2).

*Researcher's interpretations:*

Relevant question from conceptual analysis:

- How does a teacher understand his/her own practices?
- What methods of practice does a teacher employ to develop authentic learning environments?
- How does a teacher understand the learning product of innovative approaches to

teaching?

Sample D showed the theme of the teacher's perception of creativity. At this early stage of the data collection, Chris described creative learning as a teacher facilitated stimulus for learning which also drew on students' experiences. Chris valued basing learning on real life, a finding which related to the criteria recommended for education in a middle years environment, where connecting student learning to personal or real life experiences could make learning meaningful and real. The comments made by Chris seemed to reflect a degree of support for the characteristics of *relevance* and *flexibility* from Table 1 (pp. 37 - 38), when providing varied learning experiences in this classroom.

#### *Interpreting data themes into eight analytical cases*

Empirical phenomenological research exposed the interpretations of the participant's practices, experiences and classroom relationship for analysis (Moustakas, 1994). This section was about interpreting data themes into analytical cases demonstrating how a single case, to continue with the example for Case 4, was constructed. In this research, the signpost data was collated into themes for analysis in the cases. In general, those cases represented themes about:

- the teaching and learning environment;
- relationships between students and students;
- teacher and students;
- the curriculum;
- demographics of classroom; and
- teacher background and pedagogy.

The analysis of these themes for Case 4 is demonstrated in Table 3 (pp. 115 - 122). This figure demonstrated the interpretation of the teaching and learning practices of Chris' classroom around the central theme of the participants' perceptions of: creative learning and the presence of creativity in this classroom. A case question was generated from this theme: *How is creativity supported in this learning environment?* The first column of this table shows the written case. Parts of the text in this column are underlined to show the signposting process as previously demonstrated in Samples A, B, C, D. The second column demonstrated which themes of data were categorised from the transcripts for analysis and linked to the relevant questions as they emerge from the analytical framework; also indicating frequency of data. During the categorisation process, the researcher made links between related themes to seek commonalities, clarity and frequency of participants' perceptions, anomalies and contradictions in correlation to the idealised characteristics of creativity in Table 1 (pp. 37 – 38). The third column contains those analysed themes which were recurring in order to make validated claims, signifying the data's relevance for further interpretation and analysis. This column showed where the meta- analysis of these emerging themes were drawn from the case, as well as the examples to support it, by connecting the relevant themes to the research questions. The last column referred to the identified findings that show further insight into the relevant issues pertaining to the main theme of this case (perceptions and presence of creativity). These results, with reference to the six emerging themes, and the literature in Table 1 (pp. 37 – 38) contributed to the findings for the final interpretive case in Chapter 5.

**Table 3: Demonstration of case analysis**

<p><b>CASE 4: What are the indicators of creative learning as perceived by the teacher and the students? Do students participate in creative practice in this learning environment?</b></p>	<p><b>Categorising data for the cases</b></p> <p>(italicised transcripts are signposted by an <u>underline</u> in column 1. In column 2, there is a direct description about its relevance for categorisation.</p>	<p><b>Meta-analysis</b></p> <p>Information <u>highlighted</u> from Column 1, and the relevant categories of data from column 2 are together bundled and contrasted with this research questions</p>	<p><b>Interpretive case</b></p> <p>Interpretation of results from categorising data, meta-analysis and literature in Table 1 (pp. 37- 38) summarise findings.</p>
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	Relevant questions from analytical framework are connected and indicated in <i>italics</i> ).	<i>(italics)</i> to reveal meta-analysis resulting in emerging themes	
<p>The type of innovative practices which Chris introduced to the Year 5/6 area, may develop an environment that could be supportive of creativity. By contrasting the perceptions of quality learning, including creativity by Chris and the students, with the ideals of creativity as referred to in Table 1, the literature defines creativity as <i>self-identity and autonomy, non-conformity, flexibility, effectiveness and relevance, originality, risk taking and elegance of problem solving</i>. The data reflected the following main themes around student and teacher perceptions of creative learning: classroom environment; students' awareness of their own learning, curriculum and pedagogy, teacher and student interaction, and teachers' knowledge. These definitions will indicate any similar characteristics as described by and analysed from the interview transcripts to see if creativity could be supported in this environment. The results will indicate whether this classroom is open to supporting creative pedagogies as an alternative authentic learning practice in middle years classrooms.</p> <p>Firstly, Chris had changed the feel and visual appeal of the classroom environment. As discussed earlier in Case 1 and Case 2, Chris had changed the physical environment of the classroom, and was giving them a bit more <u>ownership of their work; basing it on real life experiences that are in the work force</u> (Commentary 5, L23-25S1,2TC).</p> <p>Chris further explained the possible creative elements in the new approaches to classroom practice as:  <u>I probably uhm, provide stimulus the for children- initially, to throw them into what the learning context is going to be, and relate it to their own situation. I use their own personal experiences which I find children in the middle years; you're a real person, unlike when I went to school. For instance when I have a dinner party I sit down and I get the kids to help me plan a menu, and I tell them the next day what happened. And I think that's good, I don't make it up. Whether it went good or not. I think with middle years, you realize you have issue in life, you are running a real life. I'm using probably tools or skills that I'm teaching these children.</u> I show them how I'm using them, and I think that's probably the creative practice is would say (Commentary 5, L72-80S1, 2TC).</p>	<p>Students are becoming more engaged due to relevance of the classroom environment. Chris is setting up a more creative appeal to the classroom as a stimulation for learning – <i>Q: what methods of practice does a teacher employ to develop authentic learning environments?</i></p> <p>Here Chris involves students in real life experience based learning- the stimulus is initially teacher directed. <i>Q: What methods of practice do teachers employ to develop authentic learning environments?</i></p> <p>Chris personally uses the thinking tools too- adding to the value of teaching practice. <i>Q: How do teachers understand their own practices?</i></p>	<p>Chris establishes a classroom environment which is relevant and stimulating, building teacher and student relationship. <i>RQ: What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?</i></p> <p>Teacher acknowledges the use of personal experiences as stimulus for students' learning- a more flexible interaction between teacher and student. Chris sees this approach as being creative.</p> <p>Being open and flexible to change, makes learning more relevant, meaningful and inclusive- again due to relationship being fostered. <i>RQ: What methods of creative practices or</i></p>	<p>Set up of the classroom environment identifies how it contributes to the teacher and student values of this middle years environment.</p> <p>Learning in this classroom was presented in a creative way and stimulated learning.</p> <p>It seems that Chris acknowledges the value for such characteristics for engaging, being flexible and quality learning; Chris' perceptions</p>

<p>Here, Chris attempted to create a more inviting, productive and resourceful environment, which reflected student learning, relevance and promoted thinking skills. <u>By displaying student work, thinking techniques and stimulus in the classroom, students were being made accountable for their learning, reflecting elements that could support self identity and autonomy as defined in Table 1.</u> Chris encouraged contributing in meaningful ways which provided significance to problem solving or the activities at hand, as well as self conceptualising, or being critically evaluative of their learning and actions. By opening the teachers' own world to the students, it gave a sense of effectiveness and relevance to the learning context, which could stimulate curiosity. Chris was trying to promote the awareness that learning was life long and life relevant, not just for the time they are learning in Year 5/6, and in turn create a quality learning environment which could foster creative pedagogies.</p>	<p>How Chris' classroom in summary from the transcript descriptions, reflects some characteristics of creativity in Table 1. <i>Q: Specifically with reference to Table 1 in the Literature Review the Creative Behaviours of: originality, elegance of problem solving, self identity and autonomy (self consciousness), risk taking, and flexibility.</i></p>	<p><i>strategies are identified or supported in a regular classroom?</i></p> <p>Chris is an active participant in student learning, not just the information provider. Establishes better interaction with students and facilitates trust. <i>RQ: What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?</i></p>	<p>are a starting point for supporting creative pedagogies- the valued relationship.</p> <p>In reviewing the units of work written by the 5/6 teaching team which included Chris, and contrasting them with the school vision, there was little evidence to suggest any explicit pedagogic practices that reflected or aspired to the achievement of lifelong learning skills in the curriculum in contrast to the approaches Chris used.</p>
<p>The next new approaches to curriculum and pedagogy that were introduced by Chris, and could possibly support creativity were around the themes of problem solving. The data findings showed that Chris' teaching similarly promoted elements for the elegance of problem solving as there was a process of problem solving for an idea or solution that was productive, valuable and worthwhile. When asked if Chris' students <u>'recognize that creative process is happening?'</u> Chris responded that <u>'I inform them and draw them to it.'</u> Chris further explained that:</p> <p><u>I use examples say of different companies that use tools, other children samples and adult's samples.</u> I talk to them a lot, such as today's meeting of (inaudible) in schools too. This is the tool, and this is the activity, and this is the tool and how we might use it at our staff meeting... And that the response to doing that, is <u>it puts it in context much better than saying this is what we're doing.</u> I don't often say: 'Right what we have to do is,' because that often becomes a mundane chore for them and they think 'Oh, I've got to do it.' [I would say] <u>'What would be a good idea is' or 'what do you think we could do?'</u> and then they end up getting a repertoire of <u>using the techniques, and then suggesting to me what they might do</u> (Commentary 5, L82-93S1,2TC).</p> <p>In contrast to Chris' perceptions about problem solving and the students' learning, the findings across the data appeared to support Chris. The following example shows Billy's experiences in a maths class, of a problem solving exercise, where a new shape had to be created using their knowledge of specific angles:</p>	<p>Chris applies real life examples to the thinking tools being taught and used by the students, and gets the students to suggest approaches to problem solving based on their knowledge of the tools. <i>Q: What are the teaching practices and innovative strategies in the middle years that tend to foster or reflect creativity?</i></p>	<p>Student perceptions of Chris' innovations and how fun learning occurs in their classroom reflect the relevance of Chris' program and that is engaging. <i>RQ: What methods of creative practices or strategies are identified or supported in a regular classroom? RQ: Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of every day classrooms and curriculum conditions?</i></p>	<p>Chris' approach to introducing new processes and tools for learning showed an understanding for providing <i>flexibility</i> to learning styles (an indicator of creativity), encompassing a range of teaching approaches across Key Learning Areas, rather than constructing traditional schemas, the curriculum was still explicitly taught, as prescribed by the rest of the 5/6 teaching unit</p> <p>Insights into the values which the students and teacher maintain while making choices in learning. It is important and stimulating/</p>

<p>Researcher: Okay, I'm just wondering how would you describe this type of <u>activity</u>?</p> <p>Billy: <u>Fun.</u></p> <p>Researcher: Yeah?</p> <p>Billy: Yeah.</p> <p>Researcher: Why?</p> <p>Billy: Cause uhm, <u>I cut stuff up.</u></p> <p>Researcher: Yeah, and what else did you get to use?</p> <p>Billy: <u>I used my imagination.</u></p> <p>Researcher: Yeah, how did you get to use your imagination?</p> <p>Billy: <u>You didn't have to do a certain thing, you could put like a big piece where you want.</u></p> <p>Researcher: Mmm. How does using your imagination make maths fun? <u>Like do you get to use your imagination often in maths?</u></p> <p>Billy: <u>Nope, not so much in maths.</u></p> <p>Researcher: okay, do you want to tell me where it sometimes happens? (PAUSE no answer from students) <u>Where do you sometimes use your imagination in maths?</u></p> <p>Lindsay: Uhm if you're <u>making maps</u> and stuff.</p> <p>Researcher: Mmm okay, and you don't find you get to do these types of activities?</p> <p>Lindsay: <u>Not often- sometimes.</u></p> <p>Kim: <u>Not often- but like maybe every month</u> (Commentary 4, L4-28S7, 8SC1).</p>	<p>This maths activity was 'fun' because it used imagination, involved hands on activities. Other times maths is fun because it uses imagination is during map making.</p> <p><i>Q: What are the teaching practices and innovative strategies in the middle years that tend to foster or reflect creativity?</i></p> <p>These activities are not applied very frequently, despite student enjoyment.</p> <p><i>Q: What are the teaching practices and innovative strategies in the middle years that tend to foster or reflect creativity?</i></p>	<p>Engagement could be improved if these activities were applied more often- could also be due to timetable/curriculum restrictions</p> <p><i>RQ: What are the challenges faced by teachers when introducing approaches to authentic learning, change and innovation into the classroom?</i></p> <p><i>RQ: Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?</i></p>	<p>engaging.</p> <p>Insights into the values which the students and teacher maintain while making choices in learning. It is important and stimulating/engaging.</p>
<p>In other examples from the findings, students continue to demonstrate their perceptions of creative learning in the following ways. <u>Students were asked to provide their definitions of what creativity was or meant to them in a learning context:</u></p> <p>Casey: <u>Drawing.</u></p> <p>Robyn: <u>Writing.</u></p> <p>Jamie: <u>We imagine, we use our imagination.</u></p> <p>Lee: <u>Colour.</u></p> <p>Researcher: Yeah, you colour things. And in what subjects do you <u>normally do that type of work in?</u></p> <p>Lee: <u>Integrated studies.</u></p> <p>Researcher: Integrated studies, what else?</p> <p>Lee: <u>Do a little bit in literacy, but not much. Sometimes in maths we are creative, like you have to create stuff like a graph, or to split it in two</u> (Commentary 1, L84-93S1, 2SC1).</p>	<p>Student definitions of creativity- drawing, writing, imagination, colouring, integrated studies, some literacy, some maths. <i>Q: What are the teaching practices and innovative strategies in the middle years that tend to foster or reflect creativity?</i></p>	<p>Is creativity for learning or stimulation for engagement, based on student perceptions?</p> <p><i>RQ: Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of every day classrooms and curriculum conditions?</i></p>	<p>Insights into the values which the students enjoy collaborative work. It is important and stimulating/engaging.</p> <p>The values and perceptions of creativity and innovative learning which are shown to support some of the ideals of creativity in Table 1 (pp. 37 – 38) indicate that creativity could be supported in small steps- founded on the relationship which Chris has established.</p>
<p>Alex, Kim and Dale described the relationship between creativity, fun, collaboration and variety as important for learning, and were largely reflected as activities and games:</p> <p>Kim: Mmm okay, it would be <u>more fun if we got to draw.</u></p> <p>Researcher: Uhm <u>what would make maths more fun for you?</u></p> <p>Kim: <u>More creative activities.</u></p> <p>Researcher: Alright, <u>what type of activities could you come up with, or what activities make maths more..?</u></p> <p>Kim: <u>Games.</u></p>	<p>Students indicate maths could be more creative and thus more fun- e.g. drawing, more creative activities and games.</p> <p><i>Q: What are the</i></p>	<p>It seems that at times that the perceptions of creativity are both for learning and stimulation.</p> <p>The importance of</p>	<p>Multiple opportunities to work with varied materials and learning styles, under different conditions; what</p>

<p>Researcher: Like?  Kim: (inaudible response).  Researcher: Yeah.  Kim: (inaudible response).  Researcher: Mmm.  Alex: <u>Well sometimes we have [Chris] get in a circle and uhm [Chris] has a ball and makes a number up and we have to say facts about that number when you get it, like is it and odd number, is it a factor?</u>  Kim: Mmm (agreeably).  Researcher: Oh okay I know what your saying, I know what your saying. So you find that sort of game. So if you did that game all the time in maths would that make it fun?  Kim: <u>Not all the time.</u>  Alex: <u>You need a variety.</u>  Dale: Yeah.  Researcher: A variety you think? Do you find that true of other subjects as well, like if you had a variety of things?  Alex: <u>If you had more variety it would be much better because you learn as well as having a bit of fun.</u>  Researcher: Mmm.  Dale: <u>Yeah like when you get to work in pairs</u> (Commentary 4, L35-59S7, 8SC1).</p>	<p><i>teaching practices and innovative strategies in the middle years that tend to foster or reflect creativity?</i></p> <p>Example of fun game</p> <p>Students like variety  <i>Q: In what ways do students respond to innovative and or creative teaching practices?</i></p>	<p>collaborative work when learning improves engagement.  <i>RQ: What are the different meanings attached to creativity and quality learning in education and how are such meanings related to teaching practice, learning and assessment in the middle years?</i></p> <p>When maths is perceived as more creative with Chris activities, it improves the quality of learning.</p> <p>Students' perception reveal they are open to new types of learning, reflecting some elements from Table 1 (pp. 37 – 38).</p>	<p>was significant to this success were the interactions between the students and Chris- important element for fostering a relationship conducive to creative pedagogies.</p> <p>These types of experiences which showed Chris' practices to be authentic and relevant for students. Another example where students experienced not only non-conformity and risk taking, elegance of problem solving.</p>
<p><u>Chris' approaches to teaching maths in a 'creative way' were identified by students as fun and imagination provoking. Kim commented that this activity was creative because you get to draw how you feel and what its like, what the differences say...And it was thinking, because you really do have to think about what you write and draw</u> (Commentary 3, L96-99S5,6SC1).</p> <p>The commonality between these students' descriptions of creativity, was that they showed they were open to support some of the defined characteristics of creativity in Table 1 in the following ways:</p> <ul style="list-style-type: none"> <li>• flexibility by remaining open to novelty and variety;</li> <li>• originality by maintaining sensitivity to problems and uncommonness of answers;</li> <li>• effectiveness and relevance domain specificity for maths solutions and creativity in Integrated studies;</li> <li>• non conformity perhaps from working collaboratively or by remaining open to novelty such as in the last maths activity, it could promote risk taking;</li> <li>• risk taking which was stimulated by curiosity when creating, and not having certainty of the outcome.</li> </ul> <p>The third main finding in the data about perceptions of creative learning was reflected in the teacher and student relationship. While it had been shown in the data collection so far that Chris offered multiple opportunities to work with varied materials and learning styles, under different conditions; what was significant to this success were the interactions between the students and Chris. The students and teacher were involved in a socially integrative style of pedagogy; conversations about learning encouraged both student and teacher to be engaged to take chances with each other. At times, Chris involved students in experiencing different situations to apply meaningful tools learning in class. The students also acknowledged Chris' flexibility as a teacher and the value of the Thinking tools:  Jamie: [Chris] explains it all to us on the Monday and then we bring back on the Friday,</p>	<p><i>Q: Specifically with reference to Table 1 (pp 37 – 38) in the Literature Review the Creative Behaviours of: originality, elegance of problem solving, self identity and autonomy (self consciousness), risk taking, and flexibility</i></p> <p>Students like variety and fun and collaboration  <i>Q: How are alternative approaches to teaching related to creative development for learners?</i></p> <p><i>Q: In what ways do students respond to innovative and or creative teaching approaches?</i></p> <p>Maths is creative as it is fun you draw and express feelings even in maths, and describe</p>	<p><i>RQ: What are the challenges faced by teachers when introducing approaches to authentic learning, change and innovation into the classroom?</i></p> <p>Chris provides multiple opportunities for learning develops relationship for trust and risk taking.</p> <p>Chris' relationship with the students could establish a learning environment to foster creativity pedagogies by encouraging collaboration, students taking risks in activities and with the teacher, and appeal of the classroom.  <i>RQ: What methods of creative practices or strategies are identified or supported in a regular</i></p>	<p>Students valued collaborative</p>

<p>and [Chris] checks it, and then we bring it back and do our work.  Dale: And like <u>if we don't understand something</u>  Jamie: <u>[Chris] will help us.</u>  Dale: Yeah- <u>[Chris] finds a different way to do stuff.</u>  Jamie: And like in <u>our journals.</u>  Dale: <u>Easier.</u>  Jamie: <u>We do a Lotus diagram.</u>  Researcher: Okay can u tell me more about that?  Dale: Uhm like about 30 something squares, and you do all the stuff you did in your holidays and your weekend or something. Instead of just writing like um, it all down on a piece of paper- <u>it's easier.</u>  Researcher: Why is it easier?  Dale: <u>Because its just like a better way to present it.</u>  Researcher: <u>Is it easier to think when you're doing that type of activity?</u>  Dale: <u>Yes, 'cos you need to- 'cos you get to know stuff about what we said, and what we're learning: revision</u> (Commentary 2, L206-218S3, 4SC1).</p> <p>These thinking tool activities, as Chris acknowledged gave them a range of techniques that they could apply to their learning. For example the Lotus diagram was open ended, there were little obstructions of conforming to a strict linguistic generic structure, making it 'easier' as concurred by Dale and Jamie. It would seem that students were engaged in creative elements of non-conformity and risk taking learning, which in turn stimulated risk taking and built confidence, rather than completing recount activities which would not develop metacognition, as a Lotus diagram does. <u>It was these types of experiences which showed Chris' practices to be authentic and relevant for students.</u> Another example where students <u>experienced not only non-conformity and risk taking,</u> but also flexibility and originality, was during a literacy activity which used Venn Diagrams to explore comparisons of their friends' characteristics:</p> <p>Researcher: So why did you choose that format?  'Cos I noticed that a lot of people in the class picked different ways of showing their Venn diagram, and some people used squares, some people used circles.  Why? <u>Why did you choose the way that you did?</u></p>	<p>thinking.</p> <p>Chris is approachable, students trust Chris to try new ways of learning.  <i>Q: In what ways do students respond to innovative and or creative teaching practices?</i></p> <p>Here students describe the benefit of Chris' activities, finding learning easier than before with thinking tools like Lotus diagrams.  <i>Q: How does a teacher create learning environments which support the development of new pedagogies? What factors affect this?</i></p> <p><i>Q: How are alternative approaches to teaching related to creative development for learners?</i></p> <p><i>Q: Specifically with reference to Table 1 in the Literature Review the Creative Behaviours of: originality, elegance of problem solving, self identity and autonomy (self consciousness), risk taking, and flexibility</i></p> <p>Students again describe the benefit of thinking tools- the elegance of problems solving, as described in Table 1. This type of activity is perceived to involve more creative skills, it's more interesting than traditional methods of expressing ideas and learning.</p> <p>Students describe Chris' socially</p>	<p>classroom?</p> <p><i>RQ: What are the challenges faced by teachers when introducing approaches to authentic learning, change and innovation into the classroom?</i></p> <p>Students find Chris' approach to make learning more conducive to risk taking and being engaged because they feel she is open to their learning and progress.</p> <p><i>RQ: What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?</i></p> <p>Students engaged in collaboration which are valued approaches to teaching and learning</p> <p>Students like having variety of choices, and flexible ways of presenting or demonstrating their learning.</p> <p>Learning is still limited to pen and paper, which is a constraint to learning</p> <p>The collaborative nature of this activity still demonstrates that it can support elements of creativity</p> <p><i>RQ: What are the different meanings</i></p>	<p>work when solving problems as they could take risks and seek alternatives and validation through collaborative processes taught and encouraged by Chris.</p> <p>Chris created another dimension to this learning environment whereby the new learning tools and strategies were supported by collaboration, in turn motivating student participation and understanding.</p> <p>This strategy provided stimulus for developing synthesis and evaluation of learning, and setting up a safe situation for <i>risk taking</i> and the <i>elegance of problem solving</i>, again indicating environmental conditions that could enable creative pedagogies.</p>
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<p>Kim: Because it's like...  Dale: <u>Representing...</u>  Kim: <u>A person...</u>  Dale: Because its <u>representing a person because we're people, so</u>  Researcher: Yep. And do you think that by doing the, <u>writing down the info, you have in this way, is better than other methods?</u> Like just writing in two columns...?  Dale: Yeah.  Kim: Yeah <u>it's more interesting.</u>  Researcher: Or writing a story about yourselves?  Kim: <u>'Cos then you can use your creative skills.</u>  Researcher: Okay.  Sam: Yeah.  Researcher: So <u>is it easier to create with two people?</u>  Sam: <u>Yeah.</u>  Researcher: Yeah? or by your selves?  Sam: <u>More brain knowledge.</u>  Researcher: Is that why you picked your partner?  Sam: Yeah.  Researcher: Good brain knowledge?  Sam: <u>Yeah...very good friend!</u> (Commentary 2, L107-117S3, 4SC1).</p>	<p>integrative style of pedagogy giving multiple opportunities and learning styles and materials. Students like this.  <i>Q: What are the different meanings attached to creativity and authenticity in education and how are such meanings related to teaching practice, learning and assessment in the middle years of schooling?</i></p> <p>Again students indicate a value for Chris' thinking tools, finding it interesting and enjoyable.</p>	<p><i>and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?</i></p> <p>Here being more creative is to demonstrate learning, not just a stimulation for engagement.</p> <p><i>RQ: Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of every day classrooms and curriculum conditions?</i></p>	<p>Farwest PS had not provided a timetabled Arts program (visual arts, music, dance) and it was expected that each teacher integrated these learning outcomes and experiences into their curriculum.</p>
<p>The students demonstrated a use of applying creative thinking to original solutions when choosing how to represent their thinking into a graphic representation, shape or a person of the concept to express the thinking written inside the shape. Many students chose to use different methods of representation to suit their mode of communication, rather than being restricted to writing only, yet they were still limited to pen and paper conventional methods. The collaborative nature of this activity also seemed to promote creativity as it linked a commonality of excitability, relating to the choices they could make in the activity, elevating motivation and perhaps a support for exploring non-conformity within the task. It also provided a social support for students which were relevant to their experiences at this time.</p>	<p>Chris asked students to be creative in this activity, which indicated to students to think more broadly about the possibilities/ alternatives for communicating ideas, to use their imagination, making it more fun and look appealing.</p>	<p>Chris' lack of ability in the traditional arts has restricted students' engagement in creativity.</p> <p>The school lack of funding for an Arts program affects student engagement and support for traditional creativity.</p>	<p>Issue of misunderstanding creative pedagogies and the relationship to Chris' approaches to learning for creativity.</p>
<p>The final example which further supported this notion, and revealed a significant finding about teacher knowledge and its impact of perceptions about creative learning was found in a student commentary. Carey, Robyn and Morgan described similar outcomes to Chris about the <u>Venn Diagram activity, which was used to identify and sort similarities between friends:</u></p> <p>Robyn: Yes it was <u>interesting</u> because, like, you <u>found out about the other person. And I liked the drawing part where we got to draw their belly!</u>  Researcher: Okay, was that an illustration you did or was that the diagram part?  Robyn: The diagram part.  Researcher: Okay (can you talk a bit louder 'cos I might not be able to hear you on the tape). What were you saying?  Robyn: We drew different shapes.  Researcher: Okay so <u>why did you come up with that?</u>  Robyn: <u>So it was just a bit more creative instead of just boring circles. [Chris] said to be a bit more creative.</u>  Researcher: Alright <u>so when [Chris] says be creative, what does that mean to you?</u>  Carey: <u>Normally it means, add more things on,</u></p>	<p>This teacher also has clear expectations which seem to be supported and valued by the students  <i>Q: What methods of practice do teachers employ to develop authentic learning environments? How does a teacher understand the learning product of innovative approaches to teaching?</i></p>	<p><i>RQ: What are the challenges faced by teachers when introducing approaches to authentic learning, change and innovation into the classroom?</i></p> <p>While Chris didn't teach traditional arts, there were 'arts' activities integrated through thinking tools activities, as shown in maths and literacy activities, so Chris still aimed to provide</p>	<p>The participants in this study indicated many positive values of their learning environment, as developed by Chris, though none were explicitly reflective of creativity, they indicate that it could be supported by the positive innovations practised so far.</p> <p>IMPORTANT SUMMARY FROM COLUMN 1:</p>

<p><u>instead of leaving it how it normally is.</u>  Robyn: <u>Use your imagination.</u>  Researcher: What else, when [Chris] uses that phrase, 'be creative' - what else does that mean to you? What else does that tell you about uhm [Chris'] teaching or the way that you're learning?  Morgan: <u>It means, like, the way we learn- makes it a bit more fun. And [Chris] wants it to be more creative, to look good and that!</u> (Commentary 2, L43-59S3, 4SC2).</p>		<p>innovative and quality curriculum.  <i>RQ: Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of every day classrooms and curriculum conditions?</i></p>	<p>Improvements for this classroom to more wholly support creative pedagogies, especially:  -activities that involved larger emotions</p>
<p>These students value the activity and the interest their teacher has in them presenting the work in a creative way. They liked making models and working together with their teacher. When asked about the types of creative work participated in class, <u>Robyn described a replacement teacher they had, commenting that she [was] a really good drawer, and she made us a picture, and then we got to colour it with pastels, and so we coloured it, and we used paint brushes (inaudible) stuck it above our bags</u> (Commentary 1, L94-95, S1,2).</p>		<p><i>RQ: What are the challenges faced by teachers when introducing approaches to authentic learning, change and innovation into the classroom?</i></p>	<p>-Explicit collaborative or philosophical thinking activities.   -Teachers like Chris who need more creative knowledge or experience.</p>
<p><u>Lee commented that they got to participate in different activities 'everyday' but found they 'really never get to do arts and crafts, because [Chris] doesn't know how to do it and we've done it with Miss T once, and that's the only time we've ever done arts and crafts this year</u> (Commentary 3, L79-81S5,6SC2).</p>	<p>Student was impressed by an art teacher, and enjoyed the activities.</p>	<p>Creativity could be supported to some degree due to classroom environment and student teacher relationship.</p>	<p>- teachers need to identify the profound differences between types of problem solving and problem generating behaviours.</p>
<p>Seemingly the creative skills of the teacher were also a relevant learning experience as the students wanted more participation in Arts activities <u>(there was no formal arts program at Farwest PS)</u>, indicating that due to Chris' lack of 'artistic' ability, they seldom engaged in traditional creativity as they saw it. While the planning by the 5/6 team largely illuminated inconsistent values and understandings about authenticity, this was not indicative of the approaches or values of the classroom teacher in this study. Chris' struggles to improve the quality of teaching and learning at this time were challenging. The curriculum reflected a traditional pedagogy that was standardised, which paralleled the school's measure of priorities against standardised statewide tests, like school outcomes and generalised survey outcomes.</p>	<p>Student comments that while the activities taught by Chris were different and varied, they didn't get to art and craft which was indicated to be important</p> <p><i>Q: In what ways do students respond to innovative and or creative teaching approaches?</i></p>	<p>Importance of collaborative and philosophy based discourses to improve the support for creative pedagogies.</p> <p>Teachers need more resources and professional knowledge for innovative and creative pedagogies so as not to restrict student creativity.</p>	
<p>In conclusion, this research questions whether the innovative learning experiences stimulated in this classroom could also be supportive of creativity. It was evident from the interviews that the processes of learning were favoured and more enjoyable for students in this classroom, indicating that an environment that could support creativity was recognisable. Both Chris and the students perceived this classroom as being creative at times and stimulating learning. According to Ofsted (2003), 'teachers know not only what it is they are promoting but also how to create opportunities for this to happen. Usually this means providing pupils with challenges where there is no clear cut solution and in which pupils can exert individual or group ownership' (2003, p. 2). These ideas were identified in the transcripts to varying degrees. Considering this classroom was not an explicit creative practice classroom, Chris' pedagogic practice and curriculum supported some basic elements of a creative learning environment. The students experienced some variety of learning practices where they could apply and build on knowledge; develop understandings of their own learning. In order for students to be involved in sharing the planning and evaluation of activities, this research suggests that students need to experience:</p>	<p><i>QN: What are the different meanings attached to creativity and authenticity in education and how are such meanings related to teaching practice, learning and assessment in the middle years of schooling?</i></p>	<p><i>RQ: Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of every day classrooms and curriculum conditions?</i></p> <p><i>RQ: What are the challenges faced by teachers when introducing approaches to authentic learning, change and</i></p>	

<ul style="list-style-type: none"> <li>• Activities that involved larger emotions which were necessary for developing deeper processes and higher quality creative products;</li> <li>• Explicit collaborative or philosophical thinking activities which developed deeper metacognitive thinking.</li> <li>• Teachers like Chris who need more creative knowledge or experience could involve students in drama, or role play, traditional art materials, music and so forth to stimulate learning or become products of learning outcomes.</li> </ul> <p>Sternberg (2003) contended that teaching for creative thinking means encouraging students to create, invent, discover, imagine if, suppose that, and predict. From these findings it appeared that if creativity were to become a pedagogic practice integrated in classroom's like Chris', teachers would need to identify the profound differences between types of problem solving and problem generating behaviours; understanding the interaction of individuals or learners within social systems, and the particular impact of the diverse social systems (Craft, 2003; Cropley, 2001; Csikszentmihalyi, 1996).</p>		<p><i>innovation into the classroom?</i></p> <p><i>RQ: Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?</i></p>	
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### Case summaries

In this section a case question and summary was generated for each of the eight cases and main points were derived. These summaries were used in conjunction with the research questions to create the structural analysis for the six emerging themes of meta-analysis, as demonstrated in Table 3 (pp. 115 – 122). Each case question was generated from the themes pertaining to that case about the approaches and values of teaching and learning for creativity; the quality authentic learning experiences; and to what extent these findings were conclusive or generalisable from the data collection. The eight cases included:

- Case 1: How do students value this teaching and learning environment as set by the teacher?
- Case 2: How does the teacher value the learning environment?
- Case 3: How do students demonstrate awareness of their learning environment? What are the contexts for the learning determined by the students?
- Case 4: How could creative practice be supported in this learning environment?
- Case 5: How does the relationship between learning time, and flexibility of learning, planning and engagement affect authentic learning processes?

- Case 6: What are the motivations for learning which could support a creative learning environment?
- Case 7: What are the effects of the school context on the teacher in this classroom, and how do they impact on innovative teaching practices and the possible support for the adoption of creative pedagogies in schools bound by a standards based curriculum?
- Case 8: How does the relationship between the active participation of students and their perceptions of thinking, affect authentic learning outcomes which are also supportive of creative pedagogies?

The following brief summaries reflected the major issues of each case and the associated analyses and conclusions. The extended cases are presented in the Appendices (pp. 217 - 295).

*Case 1: How do students value this teaching and learning environment as set by the teacher?*

Students acknowledged that Chris implemented a variety of different learning strategies and techniques in an attempt to engage and improve students' learning across Key Learning Areas, such as:

- Thinking tools like Venn Diagrams, rather than constructing traditional schemas;
- Collaborative work, stimulating activities and developing social skills when they took risks with peers.

The standardised curriculum was largely prescribed by the 5/6 teaching unit, but Chris tried to be innovative by presenting learning in an innovative and 'creative' way which engaged, stimulated and generated more quality learning outcomes. Students identified Chris' strategies positively:

- Recognising to some degree how and why learning tools worked, and their applications.
- They were not just passive recipients of knowledge and tasks and engaged in elements of collaborative learning.

- Acknowledged that thinking tools had relevance, ease and effectiveness for their learning.
- Valued learning process and product as having purposes in themselves and their development, learning was not a 'waste'.
- Agreed that learning had value for the teacher, in turn had value for the student also.
- Recognised that learning was organised and strategic with helpful and easy methods of applying and demonstrating learning.

Chris' classroom catered to differing abilities, cognitive styles, motivational levels and learning contexts; and was supportive of her students through the adoption of collaborative processes. The students pointed to many positive values of their learning environment. A few were identified as beginning elements of supporting creative pedagogies including *effectiveness and relevance*, *flexibility*, and *risk taking*. Students acknowledged that behaviours for organisation and problem solving were modelled by the teacher, and were part of the students' daily practice which was individually or collaboratively focused and valued. Students trusted Chris, and in turn developed trust in their ability to take risks both in front of peers, and appear in general to be motivated to learn in this environment. As a result of these indicators, many students identified learning processes as significant, supportive and stimulating. Seemingly, with the variety of approaches utilised in this classroom, students were accommodating new knowledge and trying new approaches to learning.

Main point:

- The teacher and student relationship is important for collaboration when supporting authentic learning and the introduction of new teaching innovations.

*Case 2: How does the teacher value the learning environment?*

Chris' pedagogic values and background knowledge were recognised by the 5/6's 'Early Years' style classroom environment. The classroom contained colourful posters and dangling mobiles, illustrating linguistic and thinking tool strategies. This contrasted with previous teacher Bernie's classroom set up, which Chris described as:

not a very stimulating classroom...[it] was a very drab classroom physically, there were no books on the book shelf...and not very stimulating (Commentary 5, L4-11S1, 2TC).

Chris brought other changes to this non-stimulating learning environment, including new curriculum delivery, activities and student teacher relationships, all of which were met with challenge and varying degrees of success. Initially students had not supported Chris' changes:

I had comments from children saying 'we're not used to doing things like this, it's no fun, we just like the worksheets lined up and work through them because that's what we're used to.'

The school curriculum focused on meeting the school's measures of priorities against statewide test results, like school outcomes and generalised survey outcomes. The planning team maintained inconsistent values and understandings about authenticity which also influenced students' interests for learning. For example, students preferred worksheets planned in supposedly open ended activities based on the application of Bloom's Taxonomy and Gardner's Multiple Intelligences hypothesis. Chris attempted to overcome these challenges and:

- Included collaborative activities, developing social skills and risk taking.
- Reflected on practice to improve learning and behavioural outcomes, which revealed difficulties due to students' lack of ability and knowledge of negotiated curriculum and thinking tools- which resulted in lowered expectations.

- Was flexible, using thinking tools to meet unit outcomes and was consistent, which ensured content coverage.
- Viewed students' education as ongoing beyond middle years, which took time to develop.
- Had higher expectations, realising education was more than being able to read and write or to complete standardised testing; not compartmentalised to age specific categories and outcomes.
- Valued student teacher communication, via Feedback stations.
- Valued students beginning to make some choices, and voicing opinions.

Chris valued ideals of authentic pedagogies and this was informed through ongoing professional development which was applied actively to the classroom program. Chris' progress was reflected upon, forming strength for change, which showed her risk taking potential and problem solving skills.

Main points:

- Importance of teacher perceptions and professional understandings of creativity, innovation and change, which affected teaching and learning.
- Small changes in this learning environment took time, were developmental and required a collaborative environment and good teacher student relationships, focused on elements of democratic process.

*Case 3: How do students demonstrate awareness of their learning environment? What are the contexts for learning determined by the students?*

Chris' curriculum planning was based on elements of inquiry learning, some collaborative and thinking skill activities. Chris followed the typical curriculum cycles as did the other Year 5/6 teachers, however Chris adopted activities which she hoped would promote students' thinking

skills; unlike the units of work developed by the 5/6 team. Initially Chris' program challenged both students and staff, however after a term; students' commentaries acknowledged some change:

we always used to do worksheets of find the meaning and dictionary work...it's so boring, we always have to do it (Commentary 3, L191-192S5, 6SC1).

This indicated a shift in this students values about his/her learning environment. The interviews conducted after thinking based activities with Chris, also revealed different types of discourses.

Though rudimentary in depth, students began to:

- show some understandings of the activity's purpose;
- value thinking to solve problems;
- have awareness of applying de Bono's thinking hats, and thinking tools such as BORIS (Brain Origami Related to Irrelevant Situations) and Lotus diagrams; and
- value and enjoy the processes and applications involved in achieving some outcomes based thinking tool activities.

These small successes from Chris' practice were still met with challenge, as the students' overall lack of communicative competence and capacity to express their thinking about their learning left Chris feeling that the new pedagogic practice was not valued or acknowledged. Chris relied on student behaviour and comments when they submitted work as indicators of progress. However, the ability of students to acknowledge and indicate awareness of their learning was shown to be relevant to accepting new practice, thinking tools and collaborative learning.

Some early signs of creative practice were emerging. For example, students acknowledged some activities as creative, describing a Y-diagram activity as

creative because you get to draw how you feel and what it's like, what the differences

say...And it was thinking, because you really do have to think about what you write and draw (Commentary 3, L96S5, 6SC1).

This supported Chris' intended outcomes and the context for student learning she set up: that the activity had novelty and stimulated relevance and interest. Some students recognised that Chris' approach to teaching and learning made it easier to understand and engage in. But at times some students found this to be socially confronting, particularly in collaborative activities, whereas others found them valuable for 'sharing the work load' and that 'you can learn from your partner.' It was apparent that Chris' classroom shows that engagement of learning occurs through creating an environment of trust and security in the classroom. This effectively enabled the teacher and learner to focus on the issues, goals and problems that confront them.

Collaborative learning in this classroom had not involved philosophical inquiry or the discursive practices valued by creative pedagogies. Rather it was used to spark or share ideas rather than to establish a forum to develop thinking. Students saw collaboration as working as table groups and with partners, but not as an element of creativity. There were no formal evaluations, student reflections, or anecdotal assessment or written sheets for students to complete in the classroom as an avenue for assessing awareness of the new learning environment.

Main points:

- The pedagogic approach in this classroom provided stimulation for learning rather than for teaching and learning for creativity. Some collaborative activities and activities not requiring discourses using higher order thinking could have hindered processes of creative practice.
- The elements of this learning environment which nurtured Chris' innovations could

possibly support elements of creative pedagogies.

*Case 4: How could creative practice be supported in this learning environment?*

While there were many challenges confronting Chris' attempts to innovate within a standardised curriculum, she managed to bring elements of change by offering students multiple opportunities to work with varied materials and learning styles under different conditions. Chris attempted to create an environment which was more engaging and stimulating of student learning, was productive and resourceful and most importantly reflected student learning, *relevance* and promoted thinking skills; as clearly expressed and valued by Chris. Chris:

- displayed student work, thinking techniques and stimulus, making students more accountable for their learning;
- encouraged student contributions in meaningful ways, providing significance to problem solving activities, and self conceptualising,
- was critically evaluative of student learning and actions, providing feedback stations; and
- tried to promote awareness that learning is life long and relevant, not just for Year 5/6.

Here, Chris' pedagogy indicated some very basic attributes of creative pedagogies defined in Table 1 (pp. 37 – 38):

- Public displays and feedback stations offered students direct reflection of peers, field and domain, described in *self-identity* and *autonomy* Table 1.
- Students had a sense of *effectiveness and relevance* to the learning context, stimulating *curiosity* by participating in activities reflected Chris' experiences outside of school.
- Some student perceptions showed learning was *relevant* for the future, from the processes learned when evaluating constraints of maths or literacy problems.

Chris' teaching program allowed students to practise in different contexts when applying thinking tools. Students' perceptions of creative learning activities included:

- Creativity in maths was fun and imagination provoked which appeared to support some of the ideals characteristics of creativity: *flexibility, originality, effectiveness and relevance, elegance of problem solving.*
- The processes of problem solving ideas or solutions seemed productive, valuable and worthwhile.
- Novel methods of learning, choice of different methods of representation to suit their mode of communication, rather than writing.
- Participating in collaborative activities, where they could make choices with peers which elevated motivation and social support for exploring possibilities in activities.
- More participation in Arts activities, but Chris' ability in these areas was not strong. Therefore students had not engaged in the activities in the field mostly associated with traditional notions of creativity.

There were instances where students and teacher were involved in conversations about learning which encouraged both student and teacher to take chances collaboratively. These were examples of new ways of engaging in this classroom, which were more creative than previously experienced in Bernie's classroom, and indicated the possible environment which could be supportive of creativity. The changes Chris brought to the classroom were shown to represent stimulus for learning at this stage. Chris' attempts at innovating pedagogic practice and curriculum, suggested they could provide a supportive environment to further develop elements of creative pedagogies.

For this teacher's practice to reflect a more creative classroom, students would need to:

- participate in sharing planning, developmental assessment and evaluation of activities;
- engage in explicit collaborative or philosophical thinking activities which develop deeper

metacognitive thinking; and

- have choice in learning modes of process and product.

Main points:

- Importance of collaborative and philosophy based discourses to improve the support for creative pedagogies.
- This environment could support elements of a creativity learning environment.
- The collaborative relationship between the student and teacher is significant to student engagement, relevance to learning and quality outcomes.

*Case 5: How does the relationship between learning time, and flexibility of learning, planning and engagement affect learning processes?*

The main challenge for Chris when implementing change in this classroom was the standardised curriculum and timetabling. The time allocated for the process of learning impinged on the flexibility of learning, planning and Chris' innovative practice in this Year 5/6 classroom. When Chris first taught in this classroom the learning process was restricted by the curriculum and timetable. This affected learning of content and thinking processes, and also how Chris felt about the progress and value of teaching choices made, in the following ways:

- Thinking activities such as a Lotus diagram took longer in comparison to Chris' experiences with adept Prep 1/2s taught previously.
- Students took time to be open to new thinking and flexible in presenting information such as in narrative writing.
- Chris experienced frustration, due to the length of time students took to adapt and make choices for their learning using new techniques and tools.
- It took two terms for daily processes to show change and acceptance from students.

To deal with the time/flexibility paradigm, Chris tried a range of strategies, such as building upon students' prior knowledge and familiarity of a learning area in combination with classroom management strategies, to build their confidence and to become open to new ideas and thinking. Students' understanding reflected values for engaging in processes of learning and flexibility rather than the making of products. Focusing on time management made learning relevant and of higher quality, Chris achieved this by being flexible during drafting, using dot points rather than half pages of writing. According to the literature summarised in Table 1 (pp. 37 – 38), in order for classrooms to support creative pedagogies, teachers needed to provide a set of criteria that students must meet over an extended period of time. This signified the time factor allowed for flexibility for ongoing engagement in creative learning. It was this notion which would become the underlying theme of this case, when investigating the relationship of time, flexibility and authentic learning.

The need for teachers and students to be open to the possibility of flexible time organization in teaching and learning stemmed from an acceptance of the unpredictability of risk taking for quality learning outcomes. Teachers could do this by providing *multiple opportunities* for student success such as having both teacher and student as active participants in their learning, which would bring different levels of expertise and interest to learning tasks.

#### Main points:

- Constraints on quality learning as the curriculum and timetable affected flexibility and time for learning, which in turn affected the relevance and quality of learning and the conditions conducive for creativity.
- Teachers needed to acknowledge and actively participate in being flexible when making time for learning and be persistent when applying new pedagogic practices and thinking curriculum to stimulate learning outcomes.

*Case 6: What are the motivations for learning which could support a creative learning environment?*

The motivations to learn in a different way for both the teacher, Chris, and the students were based on intrinsic and extrinsic factors which could also support creativity. Students motivations were identified by various activities enjoyed in the classroom:

- Sometimes we get the radio...because if we like what we're doing or we like what's in the background we might work harder... sport...Creating, drawing...Making things like models and that (Commentary 2, L15-23S3, 4SC2).
- Making choices, '*trying ideas*' in numeracy thinking activities based on Venn diagrams.
- Risk taking, building trust from everyday classroom occurrences such as sharing equipment.
- Activities were interesting, involving more than physical writing, such as Venn diagrams generating solutions and alternatives that are unusual, productive and worthwhile.
- Enjoying hands on creative activities- even if the students regard themselves as being too old to be 'finger painting.'
- Collaborative work; peer and self-evaluative assessment.

With regards to idealised characteristics of creativity in Table 1 (pp. 37 – 38), some of Chris' activities began to stimulate student motivations for *originality and non-conformity*, though not explicitly. An example of this was shown when students described commonalities between interest or excitement and *risk taking* particularly when working collaboratively. Students became self and peer evaluative on the process and product of their work which suggested that it was important not to always receive teacher's assessment. At this time, students began to work with peers, a feature which resembled these ideals for creative motivation in Table 1, and suggested the beginning points for an environment which could be supportive of creative pedagogies:

- *Flexibility*, students were willing to revert to beginner status, both cognitively and socially.
- *Willingness*: students began to recognize inadequacies in their own ability to work with others without fear of losing face.
- *Trust*: students trusted others to learn from them when solving problems.

While this classroom had peer and self-assessment strategies, Chris' assessment was evaluated after the product had been created, not during the process. Chris drove curriculum to provide both extrinsic motivators for learning, and opportunities for intrinsic motivations. This enabled some students to develop reflexive learning strategies which motivated learning. While some collaborative learning strategies used by Chris were also shown in the data to un motivate learning for some students, overall the approaches by Chris were stimulating in this classroom. This is largely due to the relationship built between student and teacher, creating stability for the creative environment to be constructed and developed. Perhaps variety and achievable challenge may be key factors to meet this outcome and provide a more supportive base for creativity and overall engagement.

Main points:

- Importance of the teacher and student relationship for developing innovative and authentic pedagogies.
- This relationship enables trust and engagement in collaborative activities motivating student learning.
- Enjoyable classroom activities motivate students to learn.
- These features indicate possible approaches when attempting to change a classroom

environment conducive to creative pedagogies.

*Case 7: What are the effects of the school context on the teacher in this classroom, and how does it impact on innovative teaching practices and the possible support for creative pedagogies in schools bound by a standards based curriculum?*

Chris was employed to bring innovative practice to Farwest PS. This task proved to have many challenges and obstacles for Chris, particularly when teaching standards based curriculum restricted by timetabling. In addition aspects of the school culture inhibited change. In particular, Chris' intrinsic motivation for bringing any change were impacted by the domain or social environment, curriculum, schools, 5/6 teaching staff, parents and students, demanding narrowing behaviours and pedagogy. Chris found the duration for introducing and developing new ways of learning to this classroom and the 5/6 Team difficult and longer than expected, which resulted in varying degrees of success.

Chris experienced many constraints from the domain at Farwest PS, including:

- 5/6 staff were said to believe that: 'We've done it this way, so we'll do it that way again' confirming that 'most staff in Year 5/6 at the time were set in their ways, and just wanted to keep things rolling along...[they] resented change, especially from [Chris] an Innovations and Excellence co-coordinator' (Informal Questionnaire 1).
- Changing students' classroom engagement took around two terms due to inflexibility, time, fear of change and ability.
- Standardised curriculum restricted opportunities for the introduction of the practices and time organization needed to promote creative processes of learning.
- The team members had not engaged in innovative or authentic pedagogies themselves, and found Chris' approaches confronting. This was evident by the fact that little trialing

of Chris' new practice was evident in the units of work planned by the team.

- Assessment measures had focused on product only and meeting standardised measures such as statewide testing, rather than the assessment of learning processes through collaboration, higher order thinking or problem solving.
- Sufficient time is needed for teachers to change their mindsets and practices, particularly when they were constrained about being open to change and novelty.
- School culture's inconsistencies of perceived achievements of success. Chris found that even with standardised testing, '[statewide testing]...a lot of teachers look at a piece of writing and they say oh, this is worth a 4 point 1, when you read the writing it's a very basic constructed text, but they, a lot of teachers would be happy with how this was presented' (Commentary 6, L34-39S3, 4TC).
- Chris commented that some parents did not have new knowledge about pedagogy, if any at all, and based their values on spelling and so forth from how and what they learned. It seemed that the domain and field experiences motivated them either positively or negatively when they were students. This influenced their children's acceptance of new pedagogy at school.

When schools introduce changed curriculum and pedagogical practices, the entire school community needs to be aware of the differences, so there are consistent understandings about the developing learning environment and a reduction in conflict over education values and understandings. Chris' reflections on the practices used in the learning environment ensured that the process of reflection and trying new things, continued the cycle of more innovative learning in a kind of parallel relationship for both the students and Chris.

Main point:

- The introduction of innovative pedagogies or change to improve learning and teaching outcomes is difficult to implement. However it is possible, in a school community which is open to change and is aware of the differences of perceptions of best practice. Such awareness could reduce the conflict among staff, parents and students over the most effective way to improve teaching practice and student learning outcomes.

*Case 8: How can the relationship between the active participation of students and their perceptions of thinking support the adoption of creative pedagogies and authentic learning outcomes?*

The data revealed the significance of the relationship between Chris and the students for the development of shared perceptions about learning and its significance for improved student engagement. These perceptions and relationships impacted on learning and thinking outcomes in many ways including: responsiveness to individual learning styles; students' ways of thinking; and managing a curriculum that had student relevance which makes learning more authentic.

The data also revealed that the activities in this classroom stimulated learning and hinted at the nature of a creative learning environment. However, the active participation of students was affected by the timetable and standards based curriculum. Chris indicated that difficulty of this activity was that it had to fit in a scheduled time slot:

Two Year 6 girls, and they were very excited at the development of how they worked to get their shape and I think uhm initially when I stated the questions children want to get the answer the first time, they didn't have the answer, they couldn't do it. They cottoned on that it didn't matter that they don't have the answer the first time, the children learned from that first attempt (Commentary 8, L37-457, 8TC).

This activity showed that for students to engage in challenging tasks, the teacher needed to ensure

that they have sufficient time to work on possible strategies and to reach solutions by building on trials. But Chris' activity left little room for assessment measures that would show these positive and productive developments in the individual students largely because of the preset curriculum standards outlined in the unit and the limited time available for the activity.

Main point:

- The success of the relationship between teacher and student enabled more open understandings about the perceptions of quality learning. It encouraged the teacher and her students to interact with more flexibility, thoughtfulness and overall engagement.

#### *Respondents validation of themes*

After the extended cases were written (Appendices pp. 217 - 295) they were presented to the participants, the students and Chris in order to identify further trends, implications or interpretations in the data (Cherednichenko, Davies, Kruger & O'Rourke, 2001). The participants were asked a series of semi-formal questions as outlined in the methodology:

1. Have I described your practice/ learning correctly?
2. What do we understand by what we term creativity?
3. Has your thinking changed about the way you learn/teach/interact with others in groups/ be creative?

Due to the students' ages and varying literacy capacities, it was clear they would have difficulty in reading the cases to provide validation, so the main points of the cases were verbally summarised into short statements. First, after each statement, the students were asked to indicate whether that statement was true or not. The students' responses were recorded in two columns titled 'yes and no,' to tabulate their validation. Then the students were asked to write any words under this table, which

they thought defined or described creativity as they acknowledged in the activity. The final question was simplified for this age group, and asked:

Has your thinking changed with Chris' teaching style and activities?

The results of these comments confirmed the basis of reflection on practice and validated and further developed the commentaries on teaching and learning. In general, all of the students, except for one, responded positively that the practice they experienced was accurately described. Some students also included in their validations, words confirming what creativity meant to them, which were similar to the data in the transcripts, including: showing, talking, explaining, helping, sharing around, writing, and the types of thinking tools Chris implemented. The validations made by the students after the final question, about the changes in their thinking, had not offered any further insight. Some students commented that they identified creative learning more in subjects like integrated studies, cooking and art, and others identified it in maths and literacy. Chris' responses to the validation process verified the context of the results in the cases. The results also gave valuable feedback to Chris about many elements of teaching practice and any successes of the classroom program which would have otherwise not been communicated by the students.

## **Generation of findings**

### *Meta-analysis of cases revealing six emerging themes*

The eight case summaries contained rich descriptions of data which were summarised into main points. These main points were further synthesised by selecting and combining similarities and trends to provide broad statements of results relating to the pedagogic aspects of learning and creativity which were the subject of the main research questions. The meta-analysis of the cases

resulted in six emerging themes for further analysis. The following Table 4 shows the relevant main research questions in column 1 which when contrasted with the relevant main points from the case summaries in column 2, resulted in six emerging themes in column 3:

**Table 4: Research questions addressed by the meta analyses**

Main research questions	Main points from cases	Six emerging themes of analysis (meta-analysis)
<ul style="list-style-type: none"> <li>• What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?</li> <li>• What methods of creative practices or strategies are identified or supported in a regular classroom?</li> </ul>	<ul style="list-style-type: none"> <li>• The success of the relationship between teacher and student creates more open understandings about the perceptions of learning. It encouraged teachers and students to interact with more flexibility, thinking and overall engagement.</li> <li>• The teacher and student relationship is important for collaboration when supporting authentic learning and the introduction of new teaching innovations.</li> <li>• The collaborative relationship between the student and teacher is significant to student engagement, relevance to learning and quality outcomes.</li> </ul>	<p>1. The success of the relationship between teacher and student creates open understandings about the perceptions of authentic learning. This encourages teachers and students to interact with more flexibility when teaching, learning, thinking and overall engagement.</p>
<ul style="list-style-type: none"> <li>• Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of an everyday classroom and curriculum conditions?</li> <li>• What are the challenges faced by a teacher when introducing creative approaches to authentic learning, change and innovation into the classroom?</li> </ul>	<ul style="list-style-type: none"> <li>• Importance of the teacher and student relationship for developing innovative and authentic pedagogies.</li> <li>• This relationship enables trust and engagement in collaborative activities motivating student learning.</li> <li>• Enjoyable classroom activities motivate students to learn.</li> <li>• These features indicate possible approaches when innovating a classroom environment conducive to creative pedagogies.</li> <li>• The pedagogic approach in this classroom provided</li> </ul>	<p>2. Creativity for learning or stimulation for learning.</p>

	<p>stimulation.</p> <ul style="list-style-type: none"> <li>The elements of this learning environment which nurtured Chris' innovations can support elements of creative pedagogies.</li> </ul>	
<ul style="list-style-type: none"> <li>What are the challenges faced by a teacher when introducing creative approaches to authentic learning, change and innovation into the classroom?</li> <li>What methods of creative practices or strategies are identified or supported in a regular classroom?</li> </ul>	<ul style="list-style-type: none"> <li>Constraints on authentic learning as the curriculum and timetable affected flexibility and time for learning, which in turn affected the relevance and quality of learning and the conditions conducive for creativity.</li> <li>The teacher needed to acknowledge and actively participate in being flexible when making time for learning and be persistent when applying new pedagogic practices and thinking curriculum to stimulate quality learning outcomes.</li> <li>Small changes in this learning environment took time, were developmental and required a collaborative environment and good teacher student relationships, focused on elements of democratic process.</li> </ul>	3. Restrictions of the curriculum and timetable influence the support for authentic learning outcomes such as creativity.
<ul style="list-style-type: none"> <li>What are the challenges faced by a teacher when introducing creative approaches to authentic learning, change and innovation into the classroom?</li> <li>Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?</li> <li>What methods of creative practices or strategies are identified or supported in a regular classroom?</li> </ul>	<ul style="list-style-type: none"> <li>The importance of the teacher and student relationship is important for collaboration when supporting authentic learning and the introduction of new teaching innovations.</li> </ul>	4. The relationship between the teacher and student is a recurring feature of learning in this classroom, particularly during the instances of trialing creative teaching and learning strategies.
<ul style="list-style-type: none"> <li>What methods of creative practices or strategies are identified or supported in a regular classroom?</li> <li>What are the challenges faced</li> </ul>	<ul style="list-style-type: none"> <li>The introduction of innovative pedagogies or change to improve learning and teaching outcomes is difficult to</li> </ul>	5. Constraints from the school culture, staff, parents and students affect quality learning outcomes including creativity.

<p>by a teacher when introducing creative approaches to authentic learning, change and innovation into the classroom?</p> <ul style="list-style-type: none"> <li>• Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?</li> </ul>	<p>implement. However, it is possible, in a school community which is open to change and is aware of the differences of perceptions of best practice. Such awareness could reduce the conflict among staff, parents and students over the most effective way to improve teaching practice and student learning outcomes.</p> <ul style="list-style-type: none"> <li>• Importance of teacher perceptions and professional understandings of creativity and change, which affected teaching and learning.</li> <li>• Small changes in this learning environment took time, was developmental and required a collaborative environment and good teacher student relationships, focused on elements of democratic process.</li> </ul>	
<ul style="list-style-type: none"> <li>• Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of an everyday classroom and curriculum conditions?</li> <li>• What are the challenges faced by a teacher when introducing creative approaches to authentic learning, change and innovation into the classroom?</li> <li>• Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?</li> </ul>	<ul style="list-style-type: none"> <li>• Importance of collaborative and philosophy based discourses to improve the support for creative pedagogies.</li> <li>• The importance of the teacher and student relationship is important for collaboration when supporting authentic learning and the introduction of new teaching innovations.</li> <li>• This environment could support elements of a creativity learning environment.</li> <li>• Some collaborative activities and activities not requiring discourses using higher order thinking could have hindered processes of creative practice.</li> <li>• The collaborative relationship between the</li> </ul>	<p>6. The importance of collaborative discourses when teaching, learning and planning for authentic learning outcomes, which could be supportive of creativity.</p>

	student and teacher is significant to student engagement, relevance to learning and quality outcomes.	
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The following is a brief elaboration of the six main points resulting from the data findings in the cases, which reflected the main research questions.

*The success of the relationship between teacher and student creates open understandings about the perceptions of authentic learning. This encourages teachers and students to interact with more flexibility when teaching, learning, thinking and overall engagement.*

The students had not explicitly articulated responses which would represent firm data about creativity for this research; rather they described experiences which seemed more creative than others. In doing so, they presented their judgements and recognition of the worth of this educational environment with regards to what and how they learned in the following summary:

- Enjoyment for what they perceived as creative such as drawing, making things.
- Students valued interest, relevance, organisation, problem solving, enjoyment, and ease of learning in a secure and safe learning environment, as a direct correlation of the more authentic pedagogies practiced by Chris.
- Students perceived learning to varying degrees in this classroom as process based, but without much recognition that it was problem-centered.

While the students and Chris explored new ways of teaching and learning, these new approaches had not always reflected the students' values and perceptions of creative learning being only located in the Arts. These findings were shown in the following ways:

- Traditional contexts for participating in creativity such as the Arts were not practised due

to a lack of school resources for a formal timetabled KLA, and Chris' self-attributed lack of capability in the Arts resulted in her not planning for many experiences in this area.

- Chris' focus on collaboration was generally valued by students, but the processes students used for collaboration were not assessed as a measure of creative learning or meeting curriculum outcomes.

The 'creative' learning experiences which students valued were the novel or different ways of learning, which had relevance, involved some risk taking flexibility and problem solving. These perceptions were acknowledged and valued by both Chris and the students and strengthened their relationship in a way that would support strategies of creative pedagogies. But the relationship was at an early stage of development. As Chris remarked, she was taking 'small steps'.

#### *Creativity for learning or stimulation for learning.*

Chris provided different practices where students could apply and build on knowledge and develop understandings of their own learning. These attributes contributed to a more quality learning environment than her predecessor provided, which stimulated learning and engaged students. Chris drove a positive change in providing innovation in a standards based curriculum. Despite Chris' challenges, these changes resulted in some small successes, which resulted in elements of engagement to solve problems. Chris began to create an environment where students would be more accepting to try the new innovations. These elements suggested a basis for supporting strategies for a creative learning environment.

#### *Effects of restrictions of the curriculum and timetable on authentic learning outcomes and the development of students' creativity.*

The curriculum and timetable practised by the 5/6 Unit, restricted the development of innovative

strategies largely as the new learning experiences were still categorized into subjects areas, and not across the curriculum. Also, teaching and learning through innovative processes took time, and current curriculum timetabling and compartmentalising affected the quality of creative learning processes such as:

- It was important to the process of creativity that students were not to be discouraged by extrinsic motivations of expected evaluations, reward and deadline, which were determined by the domain and field only.
- Students needed to practice those skills necessary to develop self-esteem and passion for autonomy and involvement in the decisions related to their learning and themselves.

Clearly, the complexity and interdisciplinary nature of middle years students' lives and their future, required a curriculum which reflected this reality rather than being 'sorted and boxed' into artificial subject boundaries.

*The relationship between the teacher and student is a recurring feature of learning in this classroom, particularly during the instances of trialing creative teaching and learning strategies.*

This research found that the type of relationship built between student and teacher created a type of stability for quality learning, and particularly the starting point for a creative environment to be constructed and developed from. This was identified in the following ways:

- Chris' approach to developing assessment engaged students in a modelling process for behaviours and learning procedures. Chris' approach supported the school based curriculum and classroom's rules, and while still encouraging the students to varying degrees, to bring novelty into the school context.
- The students found Chris' program to be motivating due to the variety, enjoyment, fun, ease, and challenge of the activities. Perhaps variety and achievable challenges may be

key factors in this.

- Students were provided with opportunities to trial and experience some learning processes through thinking tools.

*Constraints from the school culture, staff, parents and students affect quality learning outcomes including creativity.*

The principal at Farwest PS aimed to improve quality outcomes through the employment of Chris who was experienced in innovative curriculum and leadership, yet her attempts were met head on with challenge and constraint in the following ways:

- Initially the need for improving quality learning outcomes by employing Chris was not a constraint. However, the lack of the principal's knowledge or experience in bringing change to this environment constrained Chris' ability to successfully integrate those improvements due to challenges from staff, students and curriculum.
- The other staff members were not willingly engaged in authentic collaborative planning for change. This affected Chris' initial confidence, despite her expertise and experience in thinking and quality curriculum.
- The timetabling of curriculum and meeting times for reflecting on practice was not focused on collaborative discourses about best practice or improvements, even if the other staff outside of the Year 5/6 unit were willing to change pedagogy.
- The success of more quality and innovative pedagogies was also founded on the ability to be flexible with learning and teaching time. It took the Year 5/6 students one term to accept and engage in the different approach to teaching adopted by Chris.
- The charter priorities and unit planners for achievement at Farwest PS, along with Principal Jones' commentaries did not reflect a quality, authentic learning environment.
- Parents were generally not wholly supportive of the changes or learning in many ways,

according to the principal and Chris. This could affect students' acceptance of change and the encouragement for teachers to change their practice.

- The underlying notion here was a focus on management and heritages of knowledge, of parents, staff and students, related to product and behaviours rather than pedagogy.

*The importance of collaborative discourses among the teaching team members when teaching, learning and planning for authentic learning outcomes, which could be supportive of creativity.*

There was little or no explicit collaborative practice evident:

- during the 5/6 team's curriculum planning;
- in the units of work as an indicator of learning; and
- informal assessment of collaborative, higher order thinking.

There was no evidence of assessment of Chris' thinking tools as a learning outcome. This may have been due to standardised outcomes which needed to be cohesive within the unit, or Chris' lack of knowledge in this area. The lack of collaborative peer support affected Chris' practice, isolating her from feedback and shared ideas which would be conducive to change and innovation.

#### *Construction of the interpretive case*

In keeping with the phenomenological spirit adopted in the study, the final stage in the research is the writing of an 'interpretive case' which aims to apply the conceptual framework presented in the literature review to an explanation of the analysed perceptions presented in the eight cases of practice.

The interpretive case was constructed to present a coherent explanation of the described practices, experiences and analytical points revealed by the six emerging themes with reference to the theoretical framework presented in Table 1 (pp. 37 – 38). The data and findings from the cases and

main themes about teaching and learning for authentic learning outcomes revealed those classroom conditions which could be supportive of creative pedagogic strategies; brought to light the major issues which affected the success, perceptions, practice and implementation of innovative curriculum in this middle years classroom. The interpretive case was informed by:

- the practice and perceptions described by the teacher, principal and students;
- the cases data which was analysed with reference to the literature summarised in the idealized characteristics of creativity in Table 1 (pp. 37 - 38); and
- the summarised findings of the meta-analysis of the main points from the cases and research questions into the six main themes.

In summary, the findings of this research indicated:

- Whether or not the elements of creative pedagogies could be supported in a learning environment which is bound by accountability and standards based curriculum.
- The classroom conditions and teaching strategies which support and drive accountable decision making, thinking, innovation, life-long learning and engagement of learners within Farwest Primary School's curriculum practices.
- Chris' struggles to stimulate innovative pedagogic practices at Farwest PS, the challenges she faced, and the sporadic successes she achieved.
- Those beginning strategies and the creative processes Chris employs in the hope of bringing change to teaching and learning in a standards based curriculum environment which is fraught with resistance to change.

The findings of the final case writing were then taken to the wider literature reviewed for this research, to map the presence and absence in the data analysis of relevant issues pertaining to the

possible place of creative pedagogies in the middle years of schooling. As outlined in Chapter 1, this interpretive case study to understand and generate knowledge about practice and identify the fate of innovation in a school and the impact of standards based curriculum on creative learning in middle years classroom. Chapter 5 attempts to theorise the experiences of innovation and creativity as understood by the participants in this classroom and draw the links between Chris' challenges and the extent to which teaching and learning for creativity could possibly be developed in a classroom restricted by standards based curriculum in the middle years. Lastly, Chapter 6 presents conclusions about whether or not creative pedagogies could be supported in everyday middle years classrooms. This Chapter also suggests classroom practices and strategies which would be most conducive toward engaging teachers and students in creative practices in schools applying standards based curriculum.

## CHAPTER 5

### INTERPRETIVE CASE

#### *Introduction*

The interpretive case is the final theorized case and presents the experiences of the classroom participants studied for this research. This research applies the qualitative research methods of empirical phenomenology to the data collection in an attempt to provide an understanding of those classroom experiences (Moran & Mooney, 2002; Moustakas, 1994). The results of these findings connect the emerging themes from Chapter 4, with the summary of the literature review on creativity in Table 1 (pp. 37 - 38), to structure the findings for this final case. New knowledge is revealed through the 'small step' improvements fostered by Chris, and the struggles encountered when she attempted to implement innovative teaching and thinking tools in a school environment constrained by:

- high levels of accountability;
- timetabling of a standards based curriculum;
- the students' initial lack of engagement or being willing to change; and
- a teaching team who were resistant to change.

This case also reveals the relationship between pedagogy which reflects innovative approaches in one middle years environment, and a school context bound by an accountability and standards based curriculum. As this research was undertaken in the mid-2000s, it is important to note that the curriculum at this time reflects the transition of Curriculum Standards Framework (CSF) to Victorian Essential Learning Standards (VELS) and standardised testing of AIM. In light of these

findings, this research questions whether the conditions for engaging in quality practices, such as those attempted by Chris, could possibly support other innovative practices such as creative pedagogies, as an alternative method of learning in the middle years of schooling. It also questions whether the ideals of creativity in Table 1 (pp. 37 - 38) have a possible place in everyday classrooms. While Chris' pedagogic practices are not founded on creativity, her practices suggest that some elements of creative pedagogy might be supported in everyday classrooms. The values and practices she implements and the ways in which her new learning and collaborative environment functioned, could contribute to the creation of those environments which are more conducive to innovative change.

The first section of this case provides a brief review of Farwest PS's cultural values, with reference to the school charter, policy documents and commentaries from the eight cases to present a clear picture of the school context. This is followed by an insight into Chris' and the students' values and their experiences during this journey and time of change. Next, the case presents findings about the teacher and student classroom values, students' collaborative learning values, and Chris' struggles for change, to reveal the nature of how approaches to change are valued and practised in the Year 5/6 area by both students and the teaching team. Each area is supported by references from the eight cases and relevant literature.

Lastly, the final discussion contrasts these findings with the literature, including the idealized characteristics of creativity in Table 1 (pp. 37 – 38), to reveal further insight into the context of power struggles faced by Chris, the students, and the school at this time; and how they affect curriculum and pedagogy at the classroom level. This discussion reflects the main questions and points from the cases by heading each discussion section with the meta-analyses from the six emerging themes in Chapter 4 (pp. 96 - 151). Finally, the conclusion discusses the possibility of

whether or not classrooms in the middle years can support creative strategies for learning, teaching and engagement, or even as a foundation for classrooms that will be more conducive to innovation and change.

### **Farwest Primary School: mindsets and cultural context**

Farwest Primary School was an established school of around 450 students. It was situated in urban Melbourne, where many families experience social and economic disadvantage. The school appeared to focus on the importance of life long education for this community and asserted that its core values were based on the Four Pillars of Learning (Delors, 1996) and the local council's Community Schooling Plan (Farwest Primary School, 2002–2004) to meet this priority. Farwest PS's charter listed a range of priorities including:

- the ability to work and learn at the learner's current level;
- a safe learning environment free from violence, anxiety and fear;
- that learning continues beyond school into the rest of life;
- learning about self-responsibility and taking responsibility for one's actions;
- parents being actively involved in their child's learning;
- being part of a team and contributing to the learning of others;
- developing the children's self-esteem and making them feel good about themselves as learners;
- having the expectations that all children will be successful learners;
- that creativity and imagination are valuable aids to the learning process;
- that receiving constructive input and feedback from students is valuable for teachers; and
- tolerance of the differences in abilities and supportive of those different to us.

(Farwest Primary School, 2002-2004, p 2).

However, the school itself was not without challenges. The principal of the school, Pat Jones, who was newly appointed at the start of the research (data collection started in 2004), identified that resources and fear of change were the major influences on the school's attempts to improve its standards. Farwest PS appeared to have a corporatized approach to school management, as discussed by Dimarco (2009), whereby student learning was founded on a structured outcomes based curriculum inclusive of national testing; and there was a lack of resources in the school leaving a mind set in the school culture privileging literacy and numeracy. In particular, there was no timetabled Arts specialist program due to lack of funding, it was expected that each teacher integrated the Arts learning outcomes and experiences into his/her curriculum. Principal Jones viewed the school at this time as a

...school run down in physical appearance, and [a] lot of teachers who been at the school for a long time were resistant to change (Informal Questionnaire 1, June 2004).

The initial changes that the principal planned to implement included many processes from a management point of view (Informal Questionnaire 1, June 2004).

The Year 5/6 area of the school was one of the first areas identified by the principal for improvement, which was initiated through the employment of classroom teacher Chris, the teacher participating in this study, at the end of term 1, 2004. The principal believed that Chris would bring improvements to

...quality in schools processes; [Chris'] knowledge and experiences in innovative teaching practices; and broad curriculum knowledge to Farwest PS (Informal Questionnaire 1, June 2004).

At the time of the data collection (2004-2005), this school's teaching practices in the 5/6 area were

at a critical point, where there was a clear need for improvement and change in an environment which was not wholly supportive of innovation, and there was a need for a replacement teacher in the 5/6 area. Chris' new practices were different and challenging to the staff and students in this environment. This resulted in a power struggle of mind sets and values of pedagogy and best practice. Both Chris and the students described the previous teacher Bernie, as teaching a traditional curriculum, with little evidence of thinking curriculum or innovative practice. Rather Bernie's preferred style was didactic and supportive of top down learning, where the product of learning was favoured over the process:

Chris: I think in the past there's been a lot of stress put on the product for these, for this group of children I think if their work was neatly presented, if their margins were ruled straight, if their handwriting writing was correct- you know, things like that were, well these children were really praised you know, how beautiful perhaps their work was instead (Commentary 6, L31-33S3, 4T).

### **Chris' classroom**

Bernie's teaching reflected many of this school's pedagogic practices which focus on products as outcomes to reflect the standards based curriculum as created by the Year 5/6 unit. Whereas Chris' values and practices are different and challenging to these more traditional ideals as they try to be inclusive of the process of learning, rather than the product only. This approach reflects the literature of Csikszentmihalyi (2008), Hartley (2006) and Bresler (2002) which indicates the unrealized potential of students' creativity. Chris' values and practices are clearly the key factors which Principal Jones envisaged would change the pedagogic practices in the Year 5/6 area. Chris' new classroom idealises the essence of an early years classroom, reflective of the background knowledge and pedagogic values held and actively demonstrated by Chris. This learning environment is vastly different to Bernie's classroom set up and is more stimulating. As you

entered this room, it embraced learning in the following ways:

- public viewing of student work samples;
- clearly labelled learning environment including work stations for reflection and class voting;
- different seating areas for literacy rotations and teacher focus groups;
- supports for thinking curriculum including displays of de Bono's 6 Thinking Hats, BORIS (Brain Origami Related to Irrelevant Situations) questions, Lotus (grid based thinking tool) diagrams. Other thinking tools are listed on posters around the walls (Commentary 1, S1, 2; Commentary 2, S3, 4SC1);
- a daily task board providing structure and organisation to the apparently flexible classroom routine; and
- individual and collaborative activities set by the teacher, including constructing Venn diagrams for finding similarities and dissimilarities, Brainstorming, PMI (Plus, Minus, Interesting) charts, Y charts (Y shaped diagram to sort thinking), open ended maths questions, bodily kinaesthetic brainstorming activities, thinking activities lists such as think, fact, how, know (Commentary 1, S1, 2; Commentary 2, S3, 4SC1).

Chris describes her classroom:

My class reading activities were a more hands on approach where children were... having a bit of...at that stage, a little bit of input into what they were learning and how they were learning, the activities were more hands on based, required thinking, less worksheets, less disturbed about the ruling up of margins, and handwriting lessons and things like that (Commentary 5, L13-17S1, 2TC).

I believe that children's behaviour in the classroom is attributed to the classroom

program, so if the program is one that is interesting and engaging children where they can realise what they've learned and they learn that they all don't learn the same then it is an indication that you have a child that is more acceptable (Commentary 5, L32-35S1, 2TC).

The results of Chris' program and her values reveal a few positive changes to the flow of the classroom dynamics, including:

- Chris' approach to introducing new processes and tools for learning shows a flexible approach to learning styles. This new range of teaching approaches is applied across Key Learning Areas in a way that was more engaging than the traditional schemas written by the 5/6 teaching unit.
- Chris encourages collaborative experiences, self and peer reflection during activities.
- Students appear to becoming more engaged in this new learning environment.

Chris' expertise in innovative curriculum also meets some charter priorities of the school, such as students are encouraged to be creative and personal in developing their projects, and they also work cooperatively with other students for extended periods of time (Farwest Primary School, 2002-2004).

It is unfortunate that while the collaborative work Chris practises in this classroom is supportive of innovative and creative learning, there is little evidence in the units of work that collaborative practice is a focus for achieving learning outcomes. Also there is little reference to elements of those collaborative discussions being assessed in a way that shows developmental learning in the students during the project. If there had been assessment measures in place, then Chris may have been able to establish improved performance indicators as outcomes for the other staff, who have

been skeptical of the benefits of Chris' program. Starko (2004) and Mitchell (2003) discuss that process focused curriculum is hard to assess in comparison to curriculum which is product focused, thus making it hard to prioritize more innovative or collaborative practices. The principal acknowledges that the school's approach to pedagogy is

...still not unified, but changes in pedagogy and teaching practice have occurred...due to changes in personnel [and] involvement in Lane Clark PD' (Informal Questionnaire 1, June 2004).

Clearly the power of the system and influence of colleagues are major contributing factors in how change will occur for Chris, and the degree of success she may experience. It seems that while a teacher, like Chris, possesses the values inherent for a quality education, it is difficult to establish change without unified support, even if it were with one other staff member, let alone the whole team support. Beane (2005) agrees that a subject based approach to curriculum, like the practices at Farwest PS, makes reform difficult for staff to embrace, due to restrictions of the school system.

Beane (2005) discussed the difficulty of implementing change in a subject based curriculum. The power struggles Chris experienced restricted her ability to change the 5/6 curriculum, however she was still able to create a classroom environment which was becoming receptive to change.

O'Rourke & Dalmau (2002) explore a responsive approach to pedagogy rather than a frameworks structure. The adoption of a responsive pedagogy may possibly be a strategy to initiate change across the 5/6 teaching team. It would appear that this approach worked in Chris' classroom.

However, this can only be successful, once the 5/6 teachers are willing to acknowledge the need to change their curriculum in an authentic way.

## **Teacher and student classroom values**

The participants in this study reported many positive values about their learning environment, as introduced and developed by Chris (Case 1, Appendix 1, p. 217). It was difficult to gain conclusive data which was explicitly reflective of some of Chris' innovative learning structures and program, largely due to the lack of students' articulation as shown in the meta-analysis of the findings. However, there were times when students did present some significant perceptions and recognition of the worth of Chris' classroom with regards to what and how they learn in Case 4 (Appendix 4, p. 243) viewing their learning as:

- better structured;
- strategic with helpful and easy methods of applying and demonstrating learning;
- catering to differing abilities, cognitive styles, motivational levels and learning contexts;  
and
- supportive through collaborative processes.

When students were asked to provide their definitions of what creativity was, or meant, to them in a learning context, they responded:

Casey: Drawing.

Robyn: Writing.

Jamie: We imagine, we use our imagination.

Lee: Colour.

Researcher: Yeah, you colour things. And in what subjects do you normally do that type of work in?

Lee: Integrated studies.

Researcher: Integrated studies?

Lee: Do a little bit in literacy, but not much. Sometimes in maths we are creative, like you have to create stuff like a graph, or to split it in two (Case 4, Appendix 4, p. 243).

Behaviours for organisation and thinking tools are modelled by the teacher, and are part of the students' daily practice. It is the way they behaved as a whole group and individually, which effectively demonstrates some elements of quality teaching and learning in Chris' classroom. Students value many of Chris' methods of organisation and routine. While Chris orders the session's workload, expectations and presenting the day's work in purposeful ways, students acknowledge that the work produced is relevant:

Researcher: What do you see in this photo?

Alex: [Chris] is telling us about values, which we've already learnt but were going over it again to make sure we ('revision' interrupted by another student) understand...

Researcher: Aha. What can you tell me about the learning that's happening in this photo at the moment?

Alex: Ahh well we're all watching [Chris] listening to Dale understand it.

Researcher: Can you tell me anything about the way [Chris] is presenting the info to you?

Alex: Well [Chris] shows us by looking at us, and...[Chris] talks about it, so we understand. [Chris] doesn't say 'Oh ah. We're doing values' and [Chris] doesn't just tell us what to do, and like [Chris] told us why we put it up and everything...Mm...[Chris] talks about it.'

Researcher: So is knowing why important?

Alex: Yes, Mm, aha.

Researcher: Okay. Okay. Why? What makes you say that?

Alex and Kim: Because otherwise you won't understand why it's up there and you just think it's just a waste of paper (Commentary 2, L7-17S3, 4SC1).

Students comment they can approach Chris with a novel idea, and that there is little resistance as defined in the literature (Starko, 2004). Their participation in this classroom environment is different from their previous teacher and the students appear to be treated as learners, not just passive recipients of tasks.

Learning for these students is not a 'waste', and this type of feedback for Chris is important, as it gave...a sense of what I am doing is all worthwhile! It's a shame that students at any stage would regard learning opportunities a 'waste of time.' Maybe because I relate the reason for the learning experience to their lives? Show the value of what they are learning and why. It may also be because I allow the children to have input into their learning outcomes, then set out to make them as meaningful and 'engaging' as possible! I think I have provided this group of students opportunities to be engaged in learning situations that they may have not seen in the past. Probably not just the content, but also the way I allow the students to have ownership in its presentation and the process by which the content is learned (Informal Questionnaire 2, August 2004).

Clearly from this commentary, the students' values and motivation to learn in turn motivates Chris' values, sense of achievement and commitment to *relevance* and purpose. Despite Chris' comment, in general, Chris did not receive feedback from the students in a way that made the approaches to teaching or teaching style feel consistently valued or acknowledged. It is suggested in Chapter 4, that this communication barrier is similar to the students' communicative literacy and metacognitive capacity to explain what is happening in the photos in relation to their classroom experience by the

researcher. Chris uses the behaviour of students and comments they used when handing back their work, as indicators of the learning environment.

Another positive feature of Chris' classroom program, is that she takes risks in implementing the curriculum differently while still attempting to ensure consistency of content in covering the agreed 5/6 curriculum. An example of this is when Chris gives the students a public voice in the classroom. The students value the space in Chris' classroom where their input is publicly displayed on a feedback station. Here, students can

write stuff out when [they've] some information about what doesn't work, and when something is really important, sometimes [Chris] takes them up and puts them and like takes them to meetings and stuff' (Robyn, Commentary 1, L33-35 S1, 2SC).

The feedback station also includes a voting process for dealing with classroom issues collaboratively. Students describe the deliberative process as:

Dale: We've got like a feedback station; we write it down, we got a president, a vice president and (minute keeper) with stuff that...

Researcher: So [Chris] isn't the only person in the classroom who makes all the decisions to certain things, is that what you're saying?

Dale: Mmm not really...well.

Researcher: Does [Chris] make decisions for some things?

Dale: Yeah like if we want to have something and the president will say let's have a vote (yeah) and [Chris will] do it for us.

Jamie: We have like a vote every Friday we play games and everyone, if there are 18 people that say yes and something say no- majority rules (Commentary 2, L151-160S3, 4SC1).

Collaborative consensus has significance for these students, highlighting that these activities have some *relevance* for these students. However, comments outside of the transcripts by Jamie (Commentary 2, L151-160S3, 4SC1) indicate disappointment that despite the voting process being useful; it was not exercised much as the year went on. This is due to time constraints in the classroom including curriculum and school sports and other school based activities. According to Chell and Athayde (2009), Suda (2006) and Hartley (2006) it is important for students to make choices, and in this classroom, students and teacher value the process of making choices or having a voice. While students' choices in this classroom are limited at that point in time, with whom they work and how their classroom was organised, those choices they do have, still give them a sense of worth and value, and the beginnings of developing a sense of *self*. As Chris chooses to encourage students to exercise some simple choices, validation and voting, students begin to engage in approaches to collaborative practices which are otherwise not a feature of Farwest's Year 5/6 curriculum or practice. This approach reduces the power relationship between students and teacher to a collaborative and more democratic approach to teaching and learning, including an environment which is conducive to support change.

#### *Students' values on learning and collaboration*

The students are given many different learning opportunities with Chris' thinking tools for individual and collaborative work (Case 1 and 2). Authentic collaborative learning and peer support are important learning styles for middle years students, particularly when engaging in problem finding and solving (Chell & Athayde, 2009; Starko, 2004; Mitchell, 2003; Cropley, 2001; Sternberg, 1996). While the collaborative work in which students engage is largely used as a motivational support for the thinking tool activities, the students reported that they generally understand the purpose for the tools, such as de Bono's Thinking Hats, and indicated that they freely sought support from their peers when necessary.

However, some students found collaborative learning in this classroom also unmotivating (Case 3, Appendix 3, p. 235). A brainstorming activity using a ball game both motivates and is socially discouraging for students of this age group, as shown in Case 6 (Appendix 6, p. 266). Even though many aims of Chris' collaborative activity are achieved by the students, the pressure for such games to run smoothly is an unmotivating experience for some students, like Morgan, Carey and Lee. Some students like Robyn enjoy the activity:

...it was hard [because] it was challenging and something different...it's fun to do something different...once I got to know how to do it.

Morgan, Carey and Lee, however have a different point of view. They agree that the activity is less enjoyable because,

...when we have to go in the circle, the ball always gets passed to them instead of us (Commentary 3, L2-50S5, 6SC2).

Perhaps a variety of brainstorming games could be used in this situation where, it is less socially or engaging of peers, particularly as these students enjoyed the challenge of something new or different. This variety of learning strategies might take advantage of the dynamic nature of creativity, to continue the flow of motivation to take risks and engage in collaborative learning.

### **Chris' struggles for change**

However, the major challenges which would come to be faced by Chris at this time of implementing change impacted on the success of the quality outcomes in many ways. The improvements in classroom engagement fostered by Chris faced constant challenges. The struggles she encountered when implementing her attempts at innovative teaching were the result of power struggles with the school system and by her colleagues which included:

- The school environment being constrained by accountability, timetabling and standards based curriculum.
- At times the students and teaching team were also resistant to change.
- Chris received little support in mentoring or delivering innovative practices such as thinking skills and collaborative learning, collaborative planning or teaching.

It was difficult for Chris to improve learning outcomes with innovative teaching methods in a school context that was wholly structured and measured by a standards based curriculum and set timetable. This was because the staff and curriculum largely relied on outcomes of product as evidence of the improvements of Chris' pedagogy, which was difficult to measure due to timetabled curriculum requirements and lack of peer support. The staff members in this unit were confronted by Chris' ideas and resisted change. This affected any collaborative support for reflective practice which Chris needed, to fully implement a successful program across the grade 5/6 area. However, despite the struggle, Chris' approach to teaching and learning began to create a classroom environment which showed promise for change in student attitude, collaboration, engagement and thinking. In general Chris' pedagogic practices were: better structured with strategic and easy methods of applying and demonstrating learning. These practices catered to differing abilities, cognitive styles, motivational levels and learning contexts and were supportive through collaborative processes. Clearly these attributes of Chris' innovative practices helped students engage in learning in this middle year's classroom.

One of the biggest challenges Chris faced during this time was the lack of authentic collaborative staff planning. Chris emphasises that the four 5/6 teachers plan in a team, with little, if any, team teaching between those classes (Informal Questionnaire 2, August 2004), making the process of change across all the 5/6 curriculum impossible, and restrictive to her own classroom. Principal

Jones comments that,

Some areas (P-2) certainly do strive to this, [however]...Other pockets of the school, with staff due to retire, do not in my opinion have the same high expectations (Informal Questionnaire 1, June 2004).

Although there is little evidence of explicit strategies in policy or the units of work provided by the 5/6 team, the principal states that

with change of personnel in...Year 5-6...many students were exposed to Lane Clark teaching and learning strategies. The units of work I believe are not totally reflective of some of [the] excellent practices that occurred in these rooms, and was not evident through the units of work' (Informal Questionnaire 1, June 2004). It is also noted that 'under the SIE project and introduction of new statewide curriculum to our planning will change to address some of these questions (Informal Questionnaire 1, June 2004).

The apparent lack of authentic collaborative planning and teaching between the 5/6 teachers also reflects the way integrated curriculum is taught. The Year 5/6's planning documents show the main Key Learning Areas (KLAs) are taught largely in isolation of each other, with the integrated curriculum focus based on a Multiple Intelligences matrix. This matrix shows some linking of maths and literacy, but is not reflective of specific learning outcomes as indicated in government standards frameworks or the focus questions of the units. These findings support research by Choo (2000) who reported a 'pilot study found problems trying to fit domain general thinking skills in subject specific content knowledge. There is clearly a need for a more flexible and integrative approach to teaching thinking and learning' (2000, p. 5). Despite the charter and policies, the principal's expectations of changing the school's culture by introducing and exposing it to new professional knowledge and expertise from Chris, is not favourably acknowledged by peers and

particularly, the 5/6 team with whom Chris planned. Chris reveals that:

Team planning was extremely frustrating. My experiences and level of expertise was much greater than any other team member. This, to many teams would be beneficial and acknowledged in a very positive manner. The team I worked with didn't share these beliefs. There was a sense of threat within the group. I had many experiences to offer, supported the staff as best I could, provided many resources etcetera, however the team, although pleasant enough to me held the belief that the innovations and 'quality' learning tools I was introducing had been tried before, so therefore held a very 'ho-hum' attitude. There was very little professional dialogue about student learning at team level – another thing I found frustrating (Informal Questionnaire 2, August 2004).

The 5/6 curriculum reflects a traditional pedagogy and corporatized approach to school management (Dimarco, 2009), which is standardised and parallels the school's measure of priorities against statewide testing, like school outcomes and generalised survey outcomes, making innovation and change a challenge. Chris experiences a power struggle for change within the school community including among staff and parents, about curriculum and timetables. The team members of the 5/6 unit find Chris' approaches confronting, resulting from the frustrations from both parties due to a lack of value placed on common knowledge. Dimarco (2009) and Beane (2005) discuss these challenges, as experienced by Chris, highlighting that the capacity of the school system restricts the possibility for change and the creation of a wholly supportive environment.

Interestingly, this research finds that Chris' values about creating the learning environment differently to others are not actually perceived as too different. Staff in the 5/6 unit claimed to be

following a thinking curriculum which was inclusive, yet nothing about the agreed strategies and learning approaches defined in the unit plans seems to indicate that approaches to thinking curriculum are actually endorsed. This research suggests possible reasons as to why the 5/6 unit were reluctant to change. The school's use of team leaders or coordinators creates a hierarchy which is not supportive of collaborative processes for planning, thus confronting the team's identity when another 'expert,' such as Chris is brought into the group. Chris explains that the Year 5/6 team's approach to planning curriculum also impedes the introduction of new approaches to pedagogy:

Each team meeting I planned to introduce a new tool for learning that I had used in my classroom. I prepared a template of the tool, an explanation page where and when the tool could be used and students work samples, showing how the tool was used. The team was appreciative and grateful with what I supplied; however there was very little evidence that there was any trialing within their own classrooms. Term planning was done using previous year's planners. I attempted with the assistance of the Cluster Educator to introduce a new planning template incorporating a more 'thinking curriculum,' however this was viewed as too radical to the rest of the team. This was the reason I took on the weekly approach in small steps! (Informal Questionnaire 2, August 2004).

This notion supports the claims for a socially ecological reform proposed by O'Rourke & Dalmau (2002) who argue for a responsive approach to pedagogy, not a structured model. Despite the lack of effective collaboration by the 5/6 team, and the fact that 'little trialing' during collaborative planning is evident, it further highlights the principal's contention of the need to bring about change, and that,

...even though we would like to think all staff have encompassed a shift to teaching and

learning approaches, and pedagogy, we know that not all have (Informal Questionnaire 1, June 2004).

Change appears difficult to introduce and motivate, and is reflective of the issues for power and change on many levels within the school system, as discussed in the literature review. Despite this environment, Chris' motivation to keep going and implement change, no matter how small or effective, reflects the realisation that a few of the barriers were beginning to slowly break down through a few students behavioural shifts in the classroom (Case 7, Appendix 7, p. 281). This finding could be attributed to the relationship between the students and Chris, where all participants in this classroom are problem solvers and acting as individuals at different times, reflecting elements of Csikszentmihalyi's (2008) model in Figure 1 (p. 27).

As seen by the findings in this section so far, the mind sets, strategies of planning and curriculum used by the Year 5/6 unit at Farwest PS, heavily restrict the teachers from developing more innovative and collaborative practice, despite Chris' efforts and small successes in the classroom. More authentic and collaborative support structures need to be in place for Chris' pedagogic practices to be more accepted and rendered successful. It seems the changes Chris made with the students in this classroom are somewhat easier to achieve, compared to the change required to bring quality pedagogies, let alone creative pedagogies into a standardised curriculum entrenched in Farwest's school culture.

## **Discussion**

This discussion will review the literature in light of the significant findings from this case, which summarized the six emerging themes of analysis.

*1) The success of the relationship between teacher and student creates open understandings about the perceptions of authentic learning. This encourages teachers and students to interact with more flexibility when teaching, learning, thinking and overall engagement.*

The significant factor in implementing change in this classroom was Chris' reflective practice for ongoing learning, which helped to establish the relationship between her and the students. Chris acknowledges her practices for establishing this environment for authentic learning from experience and professional readings. These practices and values corroborate those reported in the literature, 'Teachers practice may be informed by certain principles, but loosely and variably, being influenced by social and cultural context, personal biography, and professional experience' (Sugrue & Day, 2002, p. 74). Sugrue and Day (2002) highlight the 'paradox between teachers re and en-skilling and their deskilling and deprofessionalism' (2002, p. 74) which is also applicable to Chris' experiences. The research findings reveal some insight to support this, whereby the polarised *cultural values* between the students, staff and Chris about pedagogy, initially alienate and challenge Chris, affecting her successful application of new knowledge and skills. In contrast, it seems that because of Chris' reflective practice, little deskilling and de-professionalising affects practices in this classroom the way Sugrue and Day describe. Rather, it reaffirms and redefines Chris' skills and professionalism, despite the struggles she experiences. It would suffice to say that the culturally favoured practices in the middle year's area at Farwest PS had in a way reinforced Chris' approaches to pursue pedagogic innovation in this classroom.

It appears that Chris demonstrated elements of flexibility, self-identity and autonomy, three of the essential elements contributing to creativity in education (see Table 1 pp. 37 - 38), while establishing these improved relationships with her students through reflective practice.

For example, Chris' early experiences with this class show that students are not interested in innovative curriculum and are happier when completing technically focused, task oriented work sheets. Despite this, Chris perseveres and follows this teaching style for much of term two (2004) as a form of behaviour management, and upon reflection, chooses to introduce more authentic pedagogies in small steps. The result of this again reflects O'Rourke and Dalmau's (2002) responsive approach to the classroom environment. In contrast, the student Morgan comments on this, saying

...we always used to do worksheets of find the meaning and dictionary work...it's so boring, we always have to do it (Commentary 3, L191-192S5, 6SC1).

This comment is made a term after Chris starts teaching, thus reflecting a shift in the value students place on Chris' pedagogy is slowly being realised. These findings support Starko's (2004) arguments which value the processes of learning over the product, which result in improved student engagement for learning. It also suggests that these approaches require flexibility and time, which can be difficult to implement in classrooms restricted by timetables and prescribed curriculum outcomes.

## 2) *Creativity for learning or stimulation for learning.*

An interpretation of the meta-analysis of findings reveals the notion of how learning is perceived, in contrast to the processes and products of learning and student engagement. This reveals a relationship for an environment which could support some strategies for improving student motivation and engagement of creative pedagogies. This relationship includes the processes of interactivity, flexibility, and motivations used during the learning process in this classroom and as identified in Table 1 (pp. 37 – 38). The literature asserts that individuals or learners are likely to adopt a more authentic, and for this research, creative approach to their learning, if they are initially

intrinsically interested in the activity itself, and if their social environment does not demand a narrowing behaviour into the process and production of learning outcomes (Ofsted, 2010; Chell & Athayde, 2009, Hemlin, Allwood & Martin, 2008). Covington (1998) acknowledges that intrinsic motivations are necessary for sustaining creative effort to derive rewards from the activity itself rather than the product only. This is true of Chris' new practices also. Chris drives the curriculum to provide both extrinsic motivators for learning and opportunities for intrinsic motivations to develop. Chris explains that:

Of course, positive reinforcement such as extrinsic rewards are used, however I am a big advocate for promoting intrinsic rewards for learning – reflecting on learning for self-improvement and life-long skills (Informal Questionnaire 2, August 2004).

Moreover, when students and teachers are problem finders and are involved in reflective practices it can motivate and stimulate the learning relationship. This creates a more secure and dynamic environment for learning and risk taking behavior as defined in Table 1, (pp. 37 – 38). It seems that the notion of problem finding involves both the relationship between student and teacher to develop risk taking behavior and thinking activities which stimulate learning processes and products. For this element of the meta-analysis, learning was stimulated by Chris' practices, which suggests that elements of creative learning could be developed in this environment.

*3) The restrictions of the curriculum and timetable when supporting learning outcomes such as creativity.*

This research indicates that the teachers and students at Farwest PS could be more likely to engage in new pedagogic practices if:

- they are initially intrinsically interested in the activity itself;

- their social environment, school policy and general culture did not demand and compartmentalise narrowing behaviour into task completion and the meeting of pre-set criteria; and
- the timetable and curriculum were multidisciplinary and flexible.

This research also finds that it is in the motivations experienced by the individual who affects pedagogic engagement and the support of authentic learning such as creativity. Motivation and a supportive classroom environment are important to the successful introduction of new pedagogies to schools, for students and staff (Dimarco, 2009; Starko, 2004). In this study, Chris' approaches to creating a supportive classroom environment are motivated by her processes of reflecting on the need to change her practices while student learning and engagement develops. This results in a variety of different activities and ways in which students can interact and participate in the classroom, which are also found by the students to be motivating.

Principal Jones acknowledges that the Year 5/6 staff attitude to Chris' leadership for innovation and change was not accepting:

We've done it this way, so we'll do it that way again. [The principal confirms that] most staff in Year 5/6 at the time were set in their ways, and just wanted to keep things rolling along...[they] resented change, especially from [Chris] an Innovations and Excellence co-coordinator (Informal Questionnaire 1, June 2004).

This research indicates that in order to develop strategies or creative practices in classrooms, a paradigm of flexibility, time, and motivation needs to support new pedagogy. This process of introducing new pedagogic practices will take time to develop as similarly described by the principal, that these teachers have had a greater time to be personally restricted by accumulated

knowledge, schemas and personal degrees of self-autonomy and esteem in order to be open to change and novelty. The ideals of creativity presented in Table 1 (pp. 37 - 38) indicate the importance of these characteristics as an important element for engaging in creativity; however, a great deal of support, such as the networks suggested by Hipkins (2011) need to be considered to bring gradual change to mind-sets, if at all.

The motivation for learning also affects student participation in many ways. Contributing to Chris' struggles of resistance to change by the other staff, the students in this classroom were also a constraint early on, resulting in those changes that do take place in this classroom, occurring over two terms. The active participation of students in the learning environment is influenced by the school culture, including policy documents, the community and parents (Case 8, Appendix 9, p. 295). This is also a contributing factor to the possible support of creative pedagogies, which is also concurred by Day (1997), who writes that change

would involve the school moving outwards to its community in order to create an interactive, collaborative culture, counteracting the hierarchical relationships of the traditional order, and parental reserve and caution at challenging teachers' professionalism. In this way, those same elements of ownership, control and relevance characteristic of creative teaching and learning make the community an innovative educational force (1997, p. 82).

Although the community's involvement in this research is not a focus, there is little, if any evidence shown in the meta-analyses to indicate that parents are an innovative force for supporting learning or change. The analysis of Farwest's charter priority regarding *Building communities*, shows how the school community influences curriculum and classroom practice; and what the parents' expectations for their children's education are (Case 8, Appendix 9, p. 295). It shows parent involvement and participation is actively encouraged through the School Council, parent forums

and the processes of decision-making (Farwest Primary School, 2002-2004). Dimarco (2009) discusses that schools need a supportive environment for change before they can move on to the community for support. However, from the cases, it seems that only a small proportion of that community was involved in policy decisions which determined the resources and educational experiences to be made available for learners.

*5) Constraints from the school culture, staff, parents and students affect quality learning outcomes including creativity.*

The introduction of innovative pedagogies or change to improve learning and teaching outcomes is difficult to implement. However, it is possible in a school community which could be open to change and was aware of the differences of perceptions of best practice. This awareness could reduce the conflict among staff, parents and students over the most effective way to improve teaching practice and student learning outcomes. Throughout the cases, it is suggested that the relationship built between student and teacher creates a type of stability from which a quality learning environment can be constructed and developed. These attributes are a positive force for engaging middle years students in learning and reflection, which are attributes of creative pedagogies (Suda, 2006; Durbach & Moran, 2004). Chris models processes for behaviours and learning procedures, while supporting the classroom symbolic rules, to bring some novelty to student learning; as shown in the meta-analysis. Chris recognises the value of creating an environment supportive of elements of collaboration, innovation, where students make some choices and take risks which they generally experienced as motivating. The meta-analysis of findings supports that students generally value and enjoy what they perceived as new ways of learning and creative learning, such as activities that incorporate *maths* and *finger painting, dough or clay* (Case 6, Appendix 6, p. 266). The meta-analysis of findings reveals the significance that students can be discouraged by extrinsic motivations such as expected performance as determined

solely by the teacher and without student contribution. Morgan's initial comment about opportunities to have more creative choices in maths activities is interesting, stating that '*they make us do other things,*' showing that the creative activities (if any) are planned for them. Without student contribution, their ability to practise those skills necessary to develop self-esteem and passion for autonomy and involvement in the decisions related to their learning and their own development is restricted and unmotivating, as indicated in Table 1 (pp. 37 - 38). Without student contribution to curriculum, the innovative and creative practices described by Chell and Athayde (2009), Hartley (2006) and O'Rourke and Dalmau (2002) are restricted.

Chris and the students explain their perceptions about the new practices, highlighting those motivations, understandings and contentions which reflect the value of learning in this classroom, indicating a shift which focuses more on the process, rather than only on outcomes or products. Chell and Athayde (2009), Dimarco (2009) and Starko (2006) confirm the motivational values of process over product based learning in a systematized framework. While this research found little evidence that creativity was a feature of Chris' classroom as defined in Table 1, the participants report that Chris' practices are interesting and motivating as indicated previously which they associate with being innovative and not boring (Case 8, Appendix 8, p. 295). Students described Chris' activities as containing *variety, enjoyment, fun, ease, and challenge*, words which reflect students' motivation for learning which enables them to engage in more risk taking behaviours as defined in Table 1 (pp. 37 – 38). Lastly, this research also questions whether all activities should be 'creative' or motivating and whether it is possible to have curriculum devoted to such activities, in light of a curriculum already restricted by timetabling and accountability.

*6) Collaborative discourses when teaching, learning and planning for authentic learning outcomes, which could be supportive of creativity.*

Research by Chell and Athayde (2009), Fettes (2005), Pearl and Knight (1999), and Newmann and Wehlage (1995) contends that education should provide students with the capacity to be responsible problem solvers in order to develop qualities of innovation for active participation in school and later life. While it is argued in the literature by Chell and Athayde (2009), National Middle School Association NMSA (2006) and Prosser (2006) that schools need to practise a pedagogy that focuses on problem-centered learning and innovation, rather than student-centered or prescribed curriculum-centered learning to achieve the described authentic learning outcomes, such practices are difficult to implement in schools that are attempting to manage the internal struggles for change and improvement. While it was evident that Chris employed some problem solving strategies, these thinking tools largely stimulated student engagement. This research questions how activities, like thinking tools, explain how to problem seek, as discussed in the literature by Craft (2003) and Cropley (2001), not only to problem solve. If these activities were viewed as a method of authentic assessment as described by Cropley (2001), then they would reveal outcomes of problem solving and seeking and higher order thinking, necessary for creative learning.

There is no evidence of Chris assessing thinking tools to demonstrate learning outcomes as found in the meta-analysis of findings. Choo (2000) contends that 'the assessment strategy used is important to the success of the thinking innovation for unless thinking is assessed the learning outcomes will remain an educational ideal rather than a reality' (2000, p. 7). This seems apparent for this research, due to the unprofound commentary students often give relating to understanding their learning.

There are no formal evaluations for discursive process in the classroom such as anecdotal assessment or written evaluations for students to complete in the classroom, as an avenue for assessing metacognitive language or behaviours. It is fair to note that the constraints of outcomes focused, standards based curriculum would also impact on Chris' time and support to complete such assessment. Given the time, perhaps Chris could have used the results of this type of assessment to

provide evidence to staff regarding the small successes of her program.

Research by Prosser (2006), Craft (2003), and Ofsted (2003) contend that teachers find it difficult to prioritize creative or innovative pedagogies if their practices and the learning outcomes are product focused, due to the difficulties in evaluating assessments of thinking and creative processes. For example a collaborative literacy activity used in Chris' classroom involves a ball throwing warm up activity (Case 3, Appendix 3, p. 235). This activity could be viewed as students *risk taking* in a creative activity as Chris describes that '...the thinking [was] more spontaneous, and it's trying to get it out' (Commentary 7, L61-63S5, 6TC). However, when comparing the features of this activity to Table 1 (pp. 37 – 38), they do not represent creative practices. It appears that engagement and curiosity became limited when exploration is obstructed by students' peer awareness issues which are important for motivating creative learning for students. However, for this style of activity some students find Chris' approach easier, and others, socially confronting. Perhaps this is because these activities are used to generate ideas rather than engage in authentic collaborative thinking or such discursive practice methods known to support and develop social and self-awareness (Barrow, 2010; Scholl, Nichols & Burgh, 2009; Splitter, 1995). However, the collaborative environment Chris creates shows a positive engagement for student learning and most often, students comment on preference for working as smaller table groups of about six students and with partners, reflecting the message of the literature on middle years students social needs (Hartley, 2006; O'Rourke & Dalmau, 2002).

Chris' use of thinking tools helps to develop a supportive trusting and safe environment for students to take risks in and to commence engaging in collaborative practice. A significant finding about student learning from those interviews conducted after Chris' thinking based activities, revealed a new type of discourse. It was at this time that students started to show awareness of the

applications when using de Bono's thinking hats, and thinking tools such as BORIS (Brain Origami Related to Irrelevant Situations) and Lotus diagrams, though not consistently or with conclusive results for Chris. The value of short activities may also reflect Chris' small steps approach to developing new pedagogy which would account for issues of flexibility and time for the process of change. In general, Chris' thinking tools are largely a tool for stimulation rather than for generating a learning outcome, and in fairness the school's curriculum did not reflect the 'need' for 'thinking' as a measurable outcome for academic success.

While explicit assessment of thinking was not consistently evident in Chris' classroom practice, the application of thinking tools revealed some progress in Chris' innovations. Despite the issue of assessment and learning outcomes, there are other positive outcomes from Chris' use of thinking tools which suggest the possible conditions for creativity to be developed in this environment. Chris' focus for many of the activities is based around problem solving which is supportive of creativity and plans for students to use thinking tools to help solve those problems across the curriculum.

## **Conclusion**

While the changes to the mindset and practices in this middle years classroom largely stimulated student engagement, it revealed some 'small step' successes for Chris' program. Those small steps were identified by the following classroom practices:

- students and teachers acting as individuals at different times during the learning process and taking risks;
- planning for flexible learning and choice making promoting an environment conducive to stimulating students' curiosity and risk taking, flexibility, relevance and effectiveness;
- collaborative learning and planning; and

- teacher reflective practice which is used to inform changes in teaching.

Collaboration and processes of inquiry are important features of creative pedagogies, Barrow (2010). Prosser (2006), Luke (2002) and Cropley (2001) agree that these features directly reflect the relevance and depth of learning. To achieve many of the principal's goals, the literature suggests that collaborative learning and discursive practices are important contributors (Mitchell, 2003; Luke, 2002; Craft, 2001). Yet, these factors of pedagogic practice are not mentioned in any planning document or activity document provided by the school. The capacity of teachers in the 5/6 unit to support developing inquiring minds is challenged by this research, particularly when an environment of collaborative inquiry is not supported in the curriculum, nor practiced by the teachers themselves, or when planning units of work as a team. This lack of collaborative and collegial support from Chris' team greatly affected her capacity to introduce pedagogic practices with ease and created a power struggle with colleagues who restricted progress and change in many ways. While Farwest PS aims to be

...characterised by 'Effective and efficient structures and processes; Clear shared vision; Consultative and effective decision making; High levels of professional growth... .Team planning between our enthusiastic, dedicated and experienced staff members...and a shared expectation of high standards and educational excellence contribute to the maximising of student potential (Farwest Primary School, 2002-2004).

The practices in the 5/6 area do not accurately reflect these aims. Principal Jones comments that:

...some staff cater beautifully to different pedagogical approaches, and students in these rooms are catered for in a much broader sense, preparing them for the world-effective and purposeful teaching (Informal Questionnaire 1, June 2004).

Even if good practice was occurring, the principal contends that it was not evident by conventional accountability standards, making it difficult for this school to pin point the markers of alternative quality teaching and to bring those changes to other staff. As a result, it is difficult for schools like Farwest Primary School to actively support the innovative changes or spontaneity in teaching and learning experiences in general without authentic collaborative peer discourse and support; clearly reflecting issues of power and change as discussed by Olssen (2004), Riddell (2001), and Pearl and Knight (1999). It is clear from the interpretation of data, teachers need to agree on a vision of high quality intellectual work and teach towards that vision. Possibly the approaches to pedagogy, as inferred from the case findings, standardise the staff expectations and practices of learning and teaching, making collaborative discourses difficult to practice. Seemingly, this standardisation of staff expectations then creates a standardised approach to practice and learning, thus contributing to the static mind set of some teachers and the inflexible cultural value of the school.

One approach which schools like Farwest PS could take, when struggling to implement change by introducing innovative and creative strategies is to have a 'widespread creativeness' approach, as suggested by Robinson and Aronica (2009) and Maslow (1970). Those processes in traditional arts subjects, which involve discovering personal creative potential and experiencing the wider world is applicable to everyday contexts, are a focus which may be less restrictive on school budgets. This approach to creative practices is not exclusive to gifted learning or Arts. Rather, it is an integral part of collaborative and individual learning. This notion is reflected in Csikszentmihalyi's (2008) triangulation of creativity in Figure 1 (p. 27) where the constraints of Chris' classroom are indicative of the domain. Schools like Farwest PS need to have a shared focus and understanding about the role of power, accountability, professional knowledge and acceptance or acknowledgment when implementing policy for creative learning and pedagogies. Again, the small step successes

Chris experiences reflect O'Rourke and Dalmau's (2002) responsive approach to pedagogy, rather than specific frameworks or models. The ideal of creativity in Table 1 (pp. 37 – 38), while impractical as a model on its own, could be flexibly applied in a responsive way to the curriculum needs at hand. A responsive approach to curriculum could allow schools and teachers to follow mandated curriculum, but also be left to determine their own best practices for implementing the new strategies (2010).

The interactions and relationship developed between the teacher and students was a key to the small successes of Chris' approach. Here, the value of the relationship created between students and teacher to engage in new learning experiences were at times on an individual level and a shared dynamic experience, creating elements of a supportive environment for change. Clearly this interactive approach to learning conflicts with an education system focused on product over process as discussed by Hemlin, Allwood, Martin (2008); and Hartley (2006), but it shows a starting point for schools that have a shared vision for such change. At Farwest PS, Chris received little support when mentoring or delivering innovative practices for a more interactive approach to pedagogy such as thinking skills and collaborative learning, collaborative planning or teaching. Despite these challenges, the students in Chris' classroom began to interact in a more collaborative way and participated in opportunities to learn together in a way that had not been done previously. The result of how students engaged in this classroom shows promise for Chris' strategies. Another pedagogic issue which results from a pedagogy focused on product over creative or innovative processes, is that unrealised creative potential for higher order thinking and metacognition, which is highly valued in today's knowledge economy, will be missed due to a lack of classroom exposure to these practices. Collaborative networks outside of the school as discussed by Hipkins (2011) would have provided more support for the challenges Chris faced, and provide a sounding board for reflective practice. Here the main difficulty for Chris also was to balance the power relations within

a school context that was wholly structured and measured by standards based curriculum and set timetable.

The final Chapter of this thesis, Chapter 6, summarises these results and attempts to inform the literature about the balance between perceptions and experience of curriculum, and the types of school culture and classroom environments needed to support them. It offers conclusions on the strategies and difficulties faced by teachers when attempting to change school culture to improve learning outcomes. This Chapter also discusses the implications of this study and area for future study.

## CHAPTER 6

### CONCLUSIONS

#### *Introduction*

The classroom conditions for creative pedagogies embody many of the practices which stimulate student learning and engagement in the middle years of schooling. This thesis reports the challenges of one teacher who attempts to introduce change to pedagogic practices in an everyday middle years classroom, with the aim of improving student engagement and learning. It reports the relationship between teacher practices and a classroom environment which could support creative learning in the middle years of schooling. For this study, classroom teacher Chris was employed by Principal Jones because of her reputed ability to enhance students' engagement, and to improve learning and teacher performance through implementing innovative practices. However, as discussed in the interpretive case in Chapter 5, it was clear that Chris' pedagogic practices were not specifically founded on creative teaching and learning outcomes. While Chris attempts to find opportunities to implement innovative pedagogy in her Year 5/6 classroom at Farwest Primary School, it is not without difficulty and results in small steps success only. Given the nature of everyday classrooms and the demands to meet accountability driven curriculum outcomes, it is Chris' small step successes for improving student engagement and stimulating elements of creative learning and the conditions which either support or hinder these achievements, that are the significant finding for this study.

The qualitative research methods of empirical phenomenology were applied to the data collection to provide an understanding of the participant's classroom experiences at Farwest Primary School (Moran & Mooney, 2002; Moustakas, 1994). The research questions were applied to the layers of analysis of the data collection to draw out relevant themes which would summarise the pedagogic

aspects of creative learning; dilemmas and strategies for implementing change; and possible conditions and strategies for creative pedagogies in this middle years classroom.

*Research questions:*

- What are the different meanings and values attached to learning, and how are such meanings related to teaching practice, innovative learning and assessment in the middle years?
- What methods of creative practices or strategies are identified or supported in a regular classroom?
- Can creative thinking be taught effectively as a specifically generated skill or as an integrated approach into the practices of everyday classrooms and curriculum conditions?
- What are the challenges faced by a teacher when introducing approaches to authentic learning, change and innovation into the classroom?
- Is there a place for a model of teaching practice in a standards based curriculum, which includes creative pedagogies?

The research questions connect the emerging themes from Chapter 4, with the summary of the literature review on creativity in Table 1 (pp. 37 - 38), to structure the findings for the final interpretive case. Table 1 indicates the seven main characteristics of creativity as identified in the literature: *originality, non-conformity, effectiveness and relevance, elegance of problem solving, self-identity and autonomy (self-consciousness), risk taking, and flexibility*. This table shows how these characteristic are defined and examples of how they can be applied to classroom practice. It is made clear throughout this research that these characteristics present an idealised notion of what is defined by the literature as theoretical approaches to creative pedagogy. The interpretive case is the final theorized case which reveals the experiences of the classroom participants studied for this research. This final case generates new knowledge about practice and identifies a gap between

policy and research summarised in Table 1 (pp. 37 – 38) in the fate of innovation in a school and the impact of standards based curriculum on creative learning in a middle years classroom. In summary it revealed:

- The strategies and approaches a teacher uses to engage students in curriculum and the classroom environment necessary to support those changes.
- The elements of teaching and learning that could support creative learning within the constraints of school systems and standards based curriculum.
- Those practices and classroom environmental conditions to suggest which would be supportive of creative learning, as well as those conditions which would be constraining.

In contrasting Chris' experiences to the theoretical approaches to creative pedagogy in Table 1 (pp. 37 – 38) it is clear that the literature is not inclusive of school contexts and cultures and curriculum demands. However, the findings of Chris' small step success, suggest that some elements of creative learning as shown in Table 1, can suggest strategies to stimulate classroom environments which are more conducive to creative pedagogies.

### **Themes and conclusions**

The first section of this Chapter will discuss the six emerging themes from the meta-analysis in Chapter 4 (page 96), which form the key conclusions for this research.

#### *Six emerging themes from the meta-analysis in Chapter 4:*

1. The success of the relationship between teacher and student creates open understandings about the perceptions of authentic learning. This encourages a teacher and students to interact with more flexibility when teaching, learning, thinking and overall engagement.
2. Creativity for learning or stimulation for learning.

3. Restrictions of the curriculum and timetable on for supporting authentic learning outcomes such as creativity.
4. The relationship between the teacher and student is a recurring feature of learning in this classroom, particularly during the instances of creative teaching and learning.
5. Constraints within the school culture, staff, parents and students affect quality learning outcomes including creativity.
6. The importance of collaborative discourses when teaching, learning and planning for authentic learning outcomes, which could be supportive of creativity.

These conclusions are discussed with reference to the literature and respond to the research questions for this study. The key themes are presented below. They reveal the possible links between Chris' practices and the ideals of creative learning as outlined in Table 1 (pp. 37 – 38) to indicate new knowledge about whether those ideals can realistically be supported in everyday classrooms, given the data presented in the interpretive case. This is followed by a discussion on the ways teachers can try to overcome the challenges experienced by Chris in light of the conclusions presented in this Chapter. Lastly, this Chapter will present a final proposal and offer suggestions for future research into creative pedagogies and the middle years of schooling.

## **Conclusions**

*1) Relationship between the teacher and student creates a flexible and open learning environment, supportive of change.*

This research found that a positive relationship between teacher and student enables more open understandings about the perceptions of improved learning and student engagement. When a positive relationship exists, it creates an environment which enables teachers and students to interact with more flexibility for teaching, learning, thinking and overall engagement, supporting

the research reported by Chell and Athayde (2009), Suda (2006). Clearly the different meanings and values attached to learning, creativity and collaboration influenced the development of these relationships, agreeing with the findings of Hipkins (2011) and Berkemeyer, Bos & Kuper (2010). This is also evident in the small progresses that Chris makes in engaging students in creative work. While Chris struggles to implement innovation and change in this school context, her efforts result in her developing a more successful relationship between herself and her students, thus establishing a more receptive environment for change. The nature of the role of the teacher's and students' relationships and their impact on engagement and change in that classroom appears to be associated with the initial success Chris had witnessed. While the outcome of this environmental change was not explicitly creative learning, the nature of the relationship and collaborative engagement is one identified in the literature by Hipkins (2011), Ofsted (2010), Csikszentmihalyi (2008), as one which can support creative learning. This small but evident change is reflected in the following ways:

- While Chris' new practices lack peer support in the Year 5/6 unit, the engagement of students in new ways of learning is slowly changing due to the new relationship formed in Chris' classroom. Chris' approach to changing the classroom practices and quality of learning is through the improvement of the collaborative learning relationship between teacher and students. Thus the *mind sets* and *cultural values* of a school, like Farwest PS, although implicit, appear to be the starting point for change.
- Chris' application of thinking tools stimulates an environment in which students begin to experience some new opportunities. Students showed to varying degrees that they were exercising curiosity and risk taking, becoming flexible in their classroom participation and recognising the relevance of their learning. Over the time frame of one term, these approaches were making them more receptive to accept and ready to engage in new pedagogy. All of these characteristics are similar to those identifiable in Table 1 (pp. 37 – 38).

- Chris' flexible approach to the development of innovative practices over a long period of time may have been needed to reduce the apathy from the school colleagues who are constrained by a culture which leads them to be challenged by change.

## *2) Strategies for stimulating student learning and engagement*

One of the recurring themes in this research is how creative pedagogies can be applied to regular classrooms. As found in this study, Table 1 presents idealized characteristics of what is expected of creative practices, but given the constraints of everyday classroom environments like Farwest PS, it is unlikely to be successful. However, this research suggests that the main aim for teachers who want to apply strategies for creative learning is that they develop an understanding of the processes of interacting and creating. Research by the Office for Standards in Education (UK) Ofsted (2010) supports these findings and argues that ‘teachers need to understand, through rigorous and ongoing professional development, that creative learning is more than allowing pupils to follow their interests. Careful planning is needed for enquiry, debate, speculation, experimentation, review and presentation to be productive’ (2010, p. 6). While Chris is not exclusively practicing creativity, the successful elements of her teaching are found to be positive strategies for creative learning which could be developed further. Specifically, the strategies introduced by Chris for stimulating and engaging students to try and learn in new ways include:

- Chris’ approach is to create a stimulating learning environment which is supportive of collaboration, thinking skills and sharing ideas. As a result students found these experiences to be fun, enjoyable and interesting.
- Chris used thinking tools, short learning activities and problem solving activities to stimulate inquiry and engagement. Although many of these activities did not result in explicit development of higher order thinking skills which are required for creativity (Churches, 2008), they did influence the development of a supportive and trusting learning

environment, within which more quality metacognitive practices could be developed.

*3) The curriculum and timetabling constrain pedagogic change and learning outcomes.*

In a school like Farwest PS, where pedagogy is founded on a highly structured accountability and standards based curriculum, the capacity to achieve change to meet policy goals or even creative learning is constrained. The findings of this research revealed Chris' struggles while implementing change to her classroom. Such struggles were reflected by the demands of the school policy and the general culture of the school, as well as teaching a compartmentalised curriculum which was engaging and creative (as indicated by the principal). Lingard (2010) and Sawyer (2003) support such findings, and contend that the creative elements of pedagogy and curriculum design are often controlled by school systems that perpetuate an inflexible learning environment, resulting in inauthentic approaches to pedagogy, leaving academic development measurable only by standardised testing. These factors narrow learning and promote teaching to task criteria, which focus on accountability driven outcomes, highlighting the difficulties when implementing change to everyday classrooms, a finding supported by Ofsted (2010) and Suda (2006). In summary this research reveals the following constraints on pedagogic change:

- A lack of the necessary time for students to go through processes for learning, and experience flexibility when exploring thinking activities or collaboration make problem generating and solving activities difficult to implement (Chell & Athayde, 2009; Starko, 2004; Bresler, 2002).
- A lack of a supportive collaborative staff network or partnership in the school, and possibly outside of the school, who support the professional development and values for change. The schools needed staff that were committed to changing the timetable in order to support the time frame needed to practice new pedagogies and assess them.
- The current timetable does not support creative learning as a dynamic way of learning that can be stimulated by multi-strategy approaches, both collaboratively and individually.

These dynamic experiences can be represented in many learning outcomes, such as an idea, a process of solving problems or a product. While Chris attempts to bring some elements of pedagogic change to her middle years classroom, the methods of assessment and accountability need to represent these varied learning approaches and experiences, if the practice of new pedagogies is to result in creative learning.

- The mindset of the students categorised as literacy time or maths time due to time tabling, makes thinking time and processes static and disconnected. A multi-disciplinary approach, as discussed by Hipkins (2011) and O'Rourke & Dalmau (2002) are needed.
- While this environment aims to improve the quality of learning and encourages contributing collaboratively in meaningful ways, achieving change takes time, and the application of a 'small steps' approach which requires a focus on shared understandings and explicit practice and assessment.

#### *4) Create a supportive classroom environment to engage students in learning.*

The main outcomes of this research revealed that those strategies and processes Chris used when attempting to bring change to this middle years environment are founded on the relationship between the teacher and students. This was significant because those intermittent achievements were the result of a development of trust, participation and collaboration, which in turn stimulate and motivated Chris to keep trying; despite the challenges. Clearly, Chris' approaches for constructing this classroom supported the new pedagogies, and these findings are supported by Ofsted (2010) and Suda (2006). Chris creates an atmosphere of caring based on kindness, firmness, dignity and mutual respect, which is valued by the students, as shown in Case 1 (Appendix 1, p. 217). There is some evidence from this study in Cases 5 (Appendix 5, p. 255) and 6 (Appendix 6, p. 266) which reveals students' value of an organised approach and access to multiple learning methods. Such an approach may open up possibilities to apply the Revised Bloom's Taxonomy

(Church, 2008; Anderson and Krathwohl et.al., 2001) in planning engaging activities, and would also include thinking curriculum to stimulate motivation and interest for most students in making choices about their learning. This finding suggests that it is not the activities or the units of work per se, but rather developing a classroom environment which engages students that is more influential in developing higher order thinking that supports creative learning.

*5) Constraints within the school context, staff, parents and students affect quality learning outcomes including creativity.*

This research found that the constraints influencing Chris' approach to pedagogy had been derived from the relationship between the inflexibility of school charter and policy with that of some teachers' cultural heritages of the children. This led to misconceptions about the nature of authentic learning outcomes and innovation. The challenges Chris experienced when introducing new ways of thinking about classroom practice and pedagogy were the result of her challenging the staff in her team. This problem is reflected by Csikszentmihalyi's (2008) triangulation of creativity in Figure 1 (p. 27) which indicates that creativity is determined by the domain. In light of Figure 1 and the constraints of Farwest PS, it is clear that schools need to address the role of power, accountability, professional knowledge and acceptance or acknowledgment when implementing policy for creative learning and pedagogies. Hipkins (2011) discusses that this challenge can be overcome if staff and students have a shared purpose for learning and strongly functioning professional communities. Thus it is important for schools to focus on consistency across the whole school for common understandings and value of creative pedagogy, not for just one or two teachers and their students.

It seems the constraints on flexibility and change within the school context, which are imperative to the conditions for creative learning, flow onto the students also, affecting their learning outcomes. This notion supports Csikszentmihalyi's (2008) Figure 1 as the findings also show that students in

Chris' class have to deal with their own *flexibility* issues when learning in new ways. Students commented that they were standing out from their peers with the changes to their classroom. They acknowledge that their approaches to learning are different to those in the other classes (Case 1, Appendix 1, p. 217).

*6) Collaborative discourses are important when planning, teaching and engaging students in creative learning.*

It is clear that through engagement in collaborative learning, some students were beginning to reflect on their learning and motivations for classroom engagement. Chris' encouragement of collaborative learning in the classroom motivated the relationships for some risk taking behaviours which helped them to develop trust when working with other students ('that you can learn from them,' as commented by Jamie, Case 6, Appendix 6, p. 266). Such qualities of practice are among the creative strategies supported by the research of Chell & Athayde (2009). The meta-analysis of findings reveals that students did not appear to be involved in sharing the planning and evaluation of activities. However, with the majority of curriculum constraints as presented in this study, it is understandable that Chris managed the change in a 'small steps' approach.

It is clear that the engagement of individuals in collaborative discursive communities requires a creative learning environment which encompasses many factors. According to Csikszentmihalyi (2008), these factors mainly include the students' psychological factors, the interaction with the teacher and participation in dialogue and interaction with other individuals. These factors for engaging in collaborative discourses can be affected by resisters inhibiting the process and freedom to experiment such as tolerance, appropriate modeling, encouragement and recognition during the process of creative production (Csikszentmihalyi, 2008; Starko, 2004; Craft, 2001).

An element lacking in the collaborative communities at Farwest PS which may have supported creative learning, is a set of broader networks within and outside of the school. Hipkins (2011) contends that the power relationship and collaborative nature within classrooms can be more equalised when the school support system opens up to wider collaborative networks or expertise. Such networks might have offered more support to Chris' practice and built new types of pedagogic content knowledge.

## **Discussion**

This discussion will explore the possible links between Chris' practices and the characteristics of creativity as defined in Table 1 (pp. 37 – 38). Chris' efforts to innovate the pedagogic practices of her classroom at Farwest PS were a struggle in many ways. For teachers in Chris' position, this research concludes that the literature represented in the characteristics of creativity in Table 1 including: *originality, non-conformity, effectiveness and relevance, elegance of problem solving, self-identity and autonomy (self-consciousness), risk taking, and flexibility*, largely presents an idealised vision of creative pedagogies, rather than a practical reflection of how teachers could apply creative learning in the classroom. Yet, the small successes resulting from Chris' innovative practice suggest that elements of creative practices might be supported in such learning environments with a focus on small steps and an integrated approach which focuses on those aspects of Table 1 (pp. 37 – 38) which can work in with school's needs and organisation. Chris' attempts to bring change and innovation to the middle years curriculum and pedagogic practices of the Year 5/6 unit were largely met with passive dis-engagement from other staff and at times from the students. These challenges reflect the distributions of power and their effect on policy and curriculum outcomes, management, outcomes of student learning as argued in the literature by Olssen (2004) and Teese (2000). The assumptions about the characteristics of creativity in Table 1 (pp. 37 – 38) do not take into account of, or reflect, the issues of power in everyday classrooms,

which impact the success of implementing innovation or creative learning practices. These challenges, notwithstanding, the data from this study indicate that Chris was beginning to see some success in her efforts to introduce innovative pedagogies to Farwest Primary School. Those small steps were identified by the following classroom practices in Chapter 5:

- students and teachers acting as individuals at different times during the learning process and taking risks;
- planning for flexible learning and choice making can promote an environment conducive to stimulating students' curiosity and risk taking, flexibility, relevance and effectiveness;
- collaborative learning and planning; and
- teacher reflective practice.

These small steps, as Chris called them, were the key factors which indicate that strategies for stimulating some elements creative pedagogy could be supported in middle years environments, like those at Farwest PS. This research found that implementing strategies of creative learning is complex and the result of many elements of working effectively together. It takes time and a lot of flexibility with regards to teacher and school mindsets, timetabling and curriculum planners, to achieve the desired outcomes.

If a middle years classroom is to be supportive of the types of innovation Chris was introducing, or even contemplating to introduce some of the characteristics of creativity shown in Table 1, it seems that the conventional curriculum standards need to be more inclusive and associated with flexible methods of being accountable in meeting learning outcome expectations. It was clear from this study that Chris' pedagogy faces constraints from the school curriculum, timetabling and assessment methods. However, there is little support in the literature such as Csikszentmihalyi (2008), Hartley (2006) or Craft (2001) to suggest how teachers can create learning environments characterised by

student engagement which are dynamic and responsive to students, and meet the expectations defined in Table 1 (pp. 37 – 38) and mandated curriculum. In particular, the literature offers teachers little insight for finding ways to manage a timetable which supports flexibility in teaching and learning, as an accepted practice by all, or most staff.

The types of practices which might be observed in a classroom characterised by 'creative' engagement and learning would be one founded on open and collaborative discourses between students and their teachers, as suggested earlier. This environment may even reflect the ongoing, dynamic approach to learning which involves both student and teacher actively engaging in creative processes and products. According to Choo (2000) 'the need to balance the teaching of knowledge and the development of thinking skills to process that knowledge [was] an educational imperative in order to prepare students to adapt to societal demands and changes' (2000, p. 3). The more explicit the teaching of thinking is, the greater the impact it could have on the students in terms of valuing thinking, and more importantly, thinking about their learning.

### **Final conclusions and contribution to future research**

Creative learning is a way of designing curriculum and establishing a learning environment that makes explicit learning and creative thinking through collaborative and substantive discussions. Creative pedagogies are ways in which students and teachers can collaborate and develop relationships which stimulate and engage learning in a way which is flexible and inclusive of time allowances for the learning process. While it is established in this study that Table 1 (pp. 37 -38) is an impractical model for classrooms constrained by standards curriculum and staff bound by heritages of traditional knowledge and practice, there are some elements which could possibly be developed into mainstream classrooms to improve learning outcomes. It has been shown in current research by Ofsted (2010) that mandated curriculum can be taught alongside creative approaches to

learning, in order to encourage students to think more divergently, reflect on their findings, pose questions, hypothesise and apply their learning. Chris' classroom practices showed that this was possible, albeit difficult to sustain and expand quickly. It is interesting to note that the literature referred to in Table 1 (pp. 37 – 38) does not reflect the constraints experienced by schools whose curriculum and timetables are heavily structured. Upon reflection of the findings and conclusions, there are some strategies this research would recommend as starting points for teachers who want to develop creative pedagogies in classroom environments similar to those experienced by Chris:

- Understand that creative pedagogies and thinking are not just additions to the conventional curriculum; they are the way curriculum is practiced. A timetable which is inclusive of some flexible times to practise collaborative discourses or time for thinking processes is important. While this strategy may be compartmentalised into a set time frame, it is a starting point from where continuity can be built upon. Also, assessment during the learning process is vital for the success, management and development of creative learning and general learning outcomes.
- Professional development in the ways authentic collaboration can be used for curriculum planning and teaching may improve the mind-set of staff like those at Farwest PS, and the notions of time and flexibility and authentic assessment measures of the collaborative and creative practices are paramount for any success and acceptance for the value of creative pedagogies.
- Activities such as Chris' thinking tools can be a starting point for teachers to build more substantive dialogues, which could then develop into philosophical inquiries.
- Focus on establishing a classroom physical environment and relationship of trust and dialogue between teacher and students is a fundamental starting point. Chris' approaches appear to have re-engaged students in their learning, through these relationships and classroom experiences and support. In relation to Table 1 (pp. 37 – 38), this focus could,

over time, develop the learner's sense of *self identity and autonomy* (Table 1 pp. 37 – 38) would seem to be a driving force behind the other indicators of *creativity- originality, non-conformity, flexibility* and so forth.

- Because the location of this school is in a lower socio-economic area, and is subject to the constraints of system driven indicators of performance, these mindsets will take time to shift to the acceptance of any new program, let alone creative pedagogies. It is impractical to assume that all elements of creative pedagogies could be practiced in this school context. However, the primary focus would be to realise that there is a starting point for the improvement of learning outcomes and student engagement to develop the skills for lifelong learning.

#### *Implications of this study*

The main implication from the findings in this study is the difficulty in observing creative practices in middle years classrooms which reflect the ideal characteristics of creativity in Table 1 (pp. 37 – 38). Another implication is the lack of integrated approaches to applying dynamic and integrated approaches to pedagogies like creativity to standards based curriculum. This also reflects the difficulty teachers would have if they were to be inspired to introduce such changes to their classrooms or schools like Farwest PS. Therefore, this research suggests that when inviting participating classrooms in research like this, it is important to ensure that the participants have explicit practices and understanding of the pedagogic elements. Lastly, this research finds that change in practice takes time, and perhaps a longitudinal study of a few schools would be necessary to reveal more conclusive data.

In the context of this research, an interesting future study would be to investigate those paradigms of creativity which teachers and students use in everyday classroom practice when they deal with

the unpredictability of learning in discursive practices. In particular, these discursive practices would include being engaged in purposeful dialogues that are substantive, discursive, collaborative, reflective, and negotiable. Time and flexibility are key factors in successfully achieving this change in the learning environment and for creative pedagogies to take place.

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## APPENDIX 1

All references from transcripts are coded, for example, as (Commentary 1, L14S1SC1):

Commentary 1, Line 14, Session 1, Student Commentaries Group 1. Interviews were undertaken June- August 2004.

### **CASE 1: How do students value this teaching and learning environment as set by the teacher?**

The learning environment Chris established in this Year 5/6 classroom, at Farwest Primary School, had influenced some of the students' values toward their own learning. These students' values reflected their engagement in learning in a new way, which reflected the possibility that creative learning could be supported in this environment. Though many students could not explicitly articulate responses to represent firm or conclusive data for this research, they had demonstrated their judgements and recognition of a worthy educational environment with regards to what and how they were learning. The significant values which students' placed on Chris' classroom were identified by the following themes in the data:

- new and varied learning strategies; and
- a focus on learning processes and collaborative learning.

The students in this classroom experienced two teachers in the same year, exposing them to new and varied pedagogic strategies. The current teacher, Chris, participating in this research, taught in this classroom for three quarters of the year (Commentary 2, L189S3, 4SC1). She was newly appointed at the end of term 1 (2004) as a replacement by Principal Pat Jones

...to lead Curriculum across the school due to [Bernie] being relocated to another school due to a parent assault. I wanted [Chris] to implement fresh ideas into the

school (Informal Questionnaire 1, June 2004).

The principal believed that Chris would bring to Farwest PS

quality in schools processes; knowledge and experiences in innovative teaching practices; Broad curriculum knowledge (Informal Questionnaire 1).

According to the current teacher Chris, their term one teacher Bernie, taught a traditional curriculum, no thinking curriculum or innovative practice, where the product of learning was favoured over the process. The current classroom teacher described her impression of the previous classroom environment as:

Chris: I think in the past there's been a lot of stress put on the product for these, for this group of children I think if their work was neatly presented, if their margins were ruled straight, if their handwriting writing was correct- you know, things like that were, well these children were really praised you know, how beautiful perhaps their work was instead (Commentary 6, L31-33S3, 4T).

The new experiences Chris brought to this room were evidenced by the new environment that supported thinking curriculum via displays of de Bonos 6 thinking hats, BORIS (Brain Origami Related to Irrelevant Situations) questions, LOTUS diagrams (grid based thinking tool), Feedback Stations for reflection and class voting, and other thinking tools (Commentaries 1, 2). The students participated in individual and collaborative activities, set by the teacher, including: Venn diagrams for finding similarities and dissimilarities, Brainstorming, PMI (Plus Minus Interesting) charts, Y charts (Y shaped diagram to sort thinking), open ended maths questions, bodily kinesthetic brainstorming activities, thinking activities: think, fact, how, know (Commentaries 1, 2).

In many ways Chris' practices reflected the initial expectations of the principal, which was to bring innovation to the Year 5/6 area and improve the quality of teaching and learning. The students commented that there was a difference in learning and pedagogy brought to the classroom:

Researcher: Is this something you knew how to do before this, are these thinking strategies ways that you knew how to do before? Or is this something you've learned with Chris?

Jamie, Robyn, Morgan: With [Chris] (Commentary 1, L36-38S1, 2SC1).

Chris demonstrated an ability to implement a variety of different learning strategies and techniques while the curriculum was still taught, as prescribed by the rest of the 5/6 teaching unit, but the major impact it had on this classroom was that it stimulated learning in new ways. This classroom teacher's approach to introducing new processes and tools for learning were varied, by applying different approaches to teaching across Key Learning Areas, such as using the thinking tools of Venn Diagrams, rather than constructing traditional schemas:

Venn diagrams, and this uhm, this is a very new concept to these children they really hadn't experienced this in any part of maths, so I was introducing them to it as such, uhm however it's sort of related to the unit of work so I wanted to introduce it to them in a very easy and simplistic way and the way was to uhm identify similarities and differences between them and their friends (Commentary 6, L3-7S3, 4TC).

Other thinking tools used in this classroom included PMI (Plus, Minus, Interesting) which made comprehension and analysis of the work at hand, easier for students:

Researcher: Why do you think that's an important tool to use or is it a valuable tool?

Jamie: It's an, like an easy tool to use, (interrupted: I like the diagrams) because like if

it was fun you could just put it in plus, and if it was like interesting, or if you'd never heard it before and didn't like it you could put it in minus- so it's really easy

(Commentary 1, L17-20S1, SC1).

Here, students identified, though not eloquently, their teacher's strategies, and generally recognized how and why learning tools worked, and a few applications, rather than just being passive recipients of knowledge. As the students tried to explain their understandings of how and what their teacher did in the classroom to the researcher, they showed emerging recognition for the differences between the teaching practices they were involved in:

Researcher: Okay. So is the learning that you doing now with [Chris] different or is it similar to what you had previous?

Sam: Way different.

Researcher: Different?

Sam: Different for instance.

Researcher: And how is it different?

Sam: Well [Chris] explains it more and [then] puts the good points instead of the bad points.

Researcher: How does [Chris] explain it to you, what ways does [Chris] use to try and explain info to you?

Sam: Well with like spelling because we're like very lucky (interruption: we do activities) we're the only people that get to do all these activities (interruption: sheets...activities) instead of just writing down every word, every 15 words.

(Commentary, L194-204S3, 4SC1).

Here, the students identified the difference in what and how they learned, comparatively between the two teachers, but they also indicated that their current teacher did present the learning differently from what the other 5/6 teachers did. Interestingly, all the 5/6 teachers used some similar teaching strategies, such as task boards to inform students of daily events and the day's work requirements and expectations, and it is questionable as to why these students saw it as different. Overall the students found that their teacher's particular organisation of lessons was useful, ordered and not left to last minute, modelling good work habits and an expectation of quality for the students:

Kim: Well every morning [Chris] puts like our literacy sessions on it and goes through it with us like...write this sheet and [Chris] goes through it.

Dale: [Chris] puts it all in order.

Kim: Doesn't leave it to the last minute.

Researcher: Okay and how does that help you?

Kim and Alex: Uhm, 'cos like (Researcher: so you know what to do?)(understand it) cos like tells us what to do.

Dale: [Chris] doesn't just tell us at the last minute what we have to do, [Chris] just goes oh you have to do this or that.

Researcher: Okay and so do you find that a useful tool or not a useful tool?

Kim: Yeah.

Alex: Very useful (Commentary 2, L46-58S3, 4SC1).

It was apparent that students value this method of organisation and routine. By ordering the session's work load and expectations (which all teachers at this year level did), the difference students saw was that the work they would do has significance, and was not just a 'filler' activity for them to produce. They could see that the process of their learning was valued by their teacher, as

the teacher had planned and taken time to work the daily program, which motivated some students and set up work behaviours for their future; which they found useful. Also, the way that the information was presented in this classroom, had created a different learning environment:

Researcher: What do you see in this photo?

Alex: [Chris] is telling us about values, which we've already learnt but were going over it again to make sure we ('revision' interrupted by another student) understand.

Researcher: Aha. What can you tell me about the learning that's happening in this photo at the moment?

Alex: Ahh well we're all watching [Chris] listening to understand it.

Researcher: Mmm Can you tell me anything about the way [Chris] is presenting the info to you?

Alex: Well [Chris] shows us by looking at us, and...[Chris] talks about it, so we understand. [Chris] doesn't say ...Oh ah. we're doing values' and [Chris] doesn't just tell us what to do, and like [Chris] told us why we put it up and everything...Mmm...[Chris] talks about it.

Researcher: So is knowing why important?

Alex: Yes Mmm aha.

Researcher: Okay. Why? What makes you say that?

Alex and Kim: Because otherwise you won't understand why it's up there and you just think it's just a waste of paper (Commentary 2, L7-17S3, 4SC1).

From these commentaries, the students demonstrated appreciation and acknowledgment as learners in this classroom environment. Their participation in this classroom environment was called upon differently. They were being treated as learners, not just passive recipients of tasks. They valued

learning process and product as having purpose to themselves and their development, learning was not a 'waste,' it had value for the teacher, in turn having value for the student also. The students were given different opportunities to stimulate their learning through the different teaching tools employed by Chris. However these activities appeared to be a stimulus as there were no accounts of assessments being based on the processes or engagement in those activities.

The final value students regarded as significant for learning in this classroom was collaborative work. Students commented on aspects of collaborative learning as useful to help with their engagement of the task:

Researcher: Okay. How often do you work in cooperative groups? Do you use partner work or do you sometimes do whole table group work?

Robyn: Normally when we are supposed to be working on our own, usually we help each other and work together.

Researcher: Is that something that is encouraged?

Robyn: Most times we help each other (inaudible).

Casey: And sometimes we normally just work by ourselves, or work with a partner we find we do table work (Commentary 2, L158-165S3,4 SC2).

Researcher: Using those hand actions that you're doing with all of these, how does that help you? (Hand signals for de Bono's hats-thumbs up down, etcetera)

Lee: I don't know really.

Casey: It helps you describe it, like if you say it's know, like blue, if you figure out that if you are blue you (mostly inaudible).

Researcher: In the background of which picture, can you find it for me? Double click on it, open it.

Lee: Share- you can think about something and then you can share it with your group.

Casey: Yeah or you can then share it with the class.

Researcher: Why do you think you do that? Share with the class?

Lee: Because it helps you think about it, sometimes if we don't know we share all our ideas with the other kids.

Casey: It's much better (Commentary 1, L73-83S1, 2SC).

The students found that collaborative work was valuable for solving activity related problems, they were able to take risks and share thinking through collaborative processes. They understood the purpose for the tools, such as de Bono's Thinking Hats, which they were learning, and indicated they could seek support from others when necessary. Chris created another dimension to this learning environment whereby the new learning tools and strategies were supported by collaboration. This in turn motivated student participation and understanding, and provided stimulus for developing skills of synthesis and evaluation of learning, as well as setting up a safe environment to take risks. There was space for students to have input that was made public on display in the room on the feedback station, where students could

write stuff out when [they've] some information about what doesn't work, and when something is really important, sometimes [Chris] takes them up and puts them and like takes them to meetings and stuff (Robyn, Commentary 1, L33-35 S1, 2SC).

Another strategy used by Chris was a voting process for dealing with classroom issues collaboratively, students described this process as:

Dale: We've got like a feedback station; we write it down, we got a president, a vice president and (minute keeper) with stuff that.

Researcher: Yep. So [Chris] isn't the only person in the classroom who makes all the decisions to certain things, is that what you're saying?

Dale: Mmm not really...well.

Researcher: Does [Chris] make decisions for some things?

Dale: Yeah like if we want to have something and the president will say let's have a vote (yeah) and [Chris will] do it for us.

Jamie: We have like a vote every Friday we play games and everyone, if there's 18 people that say yes and someone say no- majority rules (Commentary 2, L151-160S3, 4SC1).

Validation through a rudimentary approach to democratic process and collaborative consensus had significance for these students. Though it was commented outside of the transcripts by Jamie, that despite the voting process being useful, it was not done much as the year went on, due to time constraints in the classroom, which was disappointing. It was important for students to make choices, and in this classroom, students showed they valued the process of making choices or having a voice which was valued by the teacher, as Chris enabled this to take place, as well as the other learners. Their choices extended to whom they worked with, and how their classroom was organised, this gave the students a sense of worth and value. However, students did not appear to have choice in negotiating curriculum or assessment, or being involved in those processes.

In conclusion, the students in this study indicated many positive values of their new learning environment, as developed by the classroom teacher, including new techniques of thinking skills, processes for learning and collaboration. The approaches to learning seemed to reflect some emerging elements of more authentic and quality learning experiences as compared to the classroom pedagogy before Chris. While this classroom was demonstrating early and slow

progression for developing these outcomes, it suggests that creative pedagogies could be supported here, as there were a few of those practices indicative of some of the indicators of creative pedagogies (refer to Table 1, pp. 37 - 38), including *effectiveness and relevance*, *flexibility*, and *risk taking*. Students appeared to view their learning as:

- better structured;
- strategic with helpful and easy methods of applying and demonstrating learning; and
- it catered to differing abilities, cognitive styles, motivational levels and learning contexts;
- supportive through collaborative processes.

The students valued the behaviours for organisation and problems solving were modelled by the teacher, and were part of the students' daily practice, it was the way they did things as a whole group and individually. This relationship was important to the students, and was a significant finding from the data, as it showed students trusted the teacher, and in turn developed trust in their ability to take risks both in front of others and others. This relationship appeared to motivate students to learn in this environment, and also seemed to foster an environment suitable for creative learning. As a result of these indicators, the students identified the process of learning as significant. The product of their learning in the contexts described, were not viewed as a waste of paper. Seemingly, with the variety of approaches utilised in this classroom, students were becoming accommodating to new knowledge and trying new approaches to learning.

## APPENDIX 2

### **CASE 2: How does the teacher value the learning environment?**

The values which Chris placed on teaching and learning had a significant impact on the classroom environment. The data revealed that Chris' values were based on, but not always limited to, prior knowledge and experience as an early years teacher and training as an Innovations and Excellence coordinator, and practitioner of thinking tools. Many of Chris' values on pedagogy brought change that was received both positively and negatively by students and staff in the following themes identified in the data: the classroom environment, curriculum and collaborative learning.

This middle years classroom idealised the essence of an early years room, reflective of the background knowledge and pedagogic values held and actively demonstrated by Chris. There were colourful posters and dangling mobiles, illustrating the linguistic and thinking tool strategies important for students' use at this level; all of which were within view of the learners. As you entered this room, it was an embrace of learning, all the students' work samples could be viewed and read, showing development of understandings and skills learned over the time. The environment was clearly labelled and had different seating areas for literacy rotations and focus group learning with the teacher. When Chris started working with these students at the end of term 1, Chris described the learning environment as:

not a very stimulating classroom. There is still a display that I've left, which is the uhm, the explanation of text, text types. And I asked the children if they knew they were there, cause they were so high and the writing was so small, and they said 'no they don't. And the other thing that I left were the portraits, the children liked the portraits, and at the back of the room...apart from that, the colour paper, the borders. We focused on cleanliness; the children cleaned all their chairs. And apart from that it was a very

drab classroom physically, there were no books on the book shelf- uhm, yeah, it was very grey, drab, and not very stimulating (Commentary 5, L4-11S1, 2TC).

However, initially, Chris did not have full support of the students when Chris made these changes to the learning environment:

I had comments from children saying 'we're not used to doing things like this, it's no fun, we just like the worksheets lined up and work through them because that's what we're used to.' And that was a bit of an eye opener, and I actually saw a massive change in the behaviour of the work, in my first couple of weeks here- for the worst. And I thought, wow this was actually a totally different teaching style I suppose (Commentary 5, L17-22S1, 2TC).

It was interesting that students preferred doing worksheets at this stage, as the units of work planned by the 5/6 unit seemed to indicate that activities were based on a Bloom's/Gardner matrix of prescribed activities to choose from. The planning team maintained inconsistent values and understandings about authenticity which also affected students values and acceptance of the change. This indicated there were misconceptions or inconsistent ideas about authenticity achieved through tools like Bloom's Taxonomy and Gardner's matrices. This finding also revealed that the curriculum planners devised by the 5/6 unit totally catered to a standardised approach to practice and learning. Upon analysis of the year's documents, the main Key Learning Areas (KLAs) were taught largely in isolation of each other, with an integrated curriculum focus that was based on a Multiple Intelligences matrix. This matrix represented some linking of maths, literacy etcetera, but had not reflected specific learning outcomes as indicated in the statewide curriculum frameworks or the focus questions of the units. There was little if no indication of collaborative activities to achieve learning outcomes or any assessment measures. The units of work also did not explicitly

reflect the charter priorities of the school's aim for learning to do, know, be, and live together; particularly in light of pedagogic practice outlined in the literature (Hartley, 2006; Suda, 2006; Manning & Ryan, 2004; Barratt, 1998; Delors, 1996).

Chris' prior experience and knowledge for developing more authentic learning experiences was identified in the data by the way the standardised curriculum was delivered and planned. Chris reflected on improving practice to improve learning and behavioural outcomes. Chris commented:

I've also come from a setting where we used a Blooms/Gardner's planner with a negotiation of activities between the children and myself and I was excited about working with grade 5/6s because I had found younger children couldn't completely do their own planners. And then I came here with a Bloom's, Gardner, de Bono background, and nothing in that context. Uhm I found out that these kids didn't know much about those things and throw it out the window, rather than to take it any further. I'd rather them understand what the thinking tools means and all that jazz. Although as a teacher I planned like that, and the activities were still based like that- where they were still covering all sorts of things. In the next week or two the children were getting book reports for homework and the assessment criteria are based on Blooms/Gardener's activities and they have to acquire so many points and that's how I'm doing it. I'd like to be in a position where they can choose their intelligences but they haven't had enough work. They need to be taught (Commentary 5, L127-139S1,2TC).

Chris' approach which used Bloom's and Gardner activities were aimed at building upon students' self-awareness of their skills. However the 5/6 units of work did not reflect Chris' strategies or approaches. Despite this lack of support from the teaching team, Chris took the risk of implementing the curriculum differently, yet still ensured consistency of what was covered. Chris

also acknowledged realistic expectations of the students in terms of their ability to learn with the alternative approaches to participating in and choosing activities. This indicated a value of the students' learning requirements:

I'm doing a big sell- a big, big sell for junior school teachers, and I don't care what school they're from, or where I meet them, to have a synergistic program that is a thinking curriculum in line with your curriculum, because I see these children are in a government school that their skills, and I'm talking general skills, not even thinking skills whatever. Their skills are so low and I attribute that to how they've learned. They've learned it-now what do we do? They don't understand that they need something- that it's an evolving process to use that skill again and again. And the knowledge of the children that I'm teaching now is so low, in my eyes, that I, like I said I come from a P-2 background, and I realise that, you know, anyone can come to school and read and write and be fairly numerate- isn't that amazing! That synergistic program is really important I think. You don't teach curriculum and you don't teach tools, you teach curriculum through thinking tools. And that's what I sort of uhm learned with this group of kids now. It's difficult, because I see they're going on at the end of year six to secondary, and you know they're going to a secondary school where they they'll be fine, but they won't be as good as they could be- that's my view (Commentary 5, L145-159S1, 2TC).

Chris critically validated and evaluated the choices made for approaching the learning environment in this classroom. Chris had a whole view of the students' education, rather than just teaching them for meeting grade 5/6 outcomes. Chris understood where students have come from scholastically, and where they should be going. This highlighted that time and the developmental approach to curriculum from a whole school perspective was important. It had not compartmentalised teaching

into grades Prep-2, 3-4 and 5-6 then Secondary. Unfortunately this holistic approach was not so sequential in Farwest's charter, nor seemed to be supported by some of the other staff, again making Chris' progress slow and difficult.

The next meaningful value Chris placed on learning was collaboration. Chris realised that developing a collaborative learning environment, developed social skills and support structures for problem solving activities for the students. This approach was based on Chris' informed practice of professional readings and experience:

They could choose whoever they wanted to work with and it was interesting because a couple of them wanted to just straight away draw the circles however they didn't understand that I was actually looking at how they overlapped two different things so that the differences and similarities or things that they liked between their friends..uhm (Commentary 6, L11-15S3, 4TC).

And well, my research and my readings about numeracy that most children learn a lot from parallel learning- learning from their peers, and I do this also in small groups, where it's very mixed ability in maths, so the small group, they might not actually use, they'll use small bits of paper- pieces of paper screwed up and toss the screwed up pieces of paper to each other to contribute (Commentary 7, L52-56S5, 6TC).

The teaching strategies implemented by the classroom teacher at this stage were:

...my class reading activities were a more hands on approach where children were uhm having a bit of uhm at that stage, a little bit of input into what they were learning and how they were learning, the activities were more hands on based, required thinking, less worksheets, less disturbed about the ruling up of margins, and handwriting lessons and

things like that (Commentary 5, L13-17S1, 2TC).

I believe that children's behaviour in the classroom is attributed to the classroom program, so if the program is one that is interesting and engaging children where they can realise what they've learned and they learn that they all don't learn the same then it is an indication that you have a child that is more acceptable (Commentary 5, L32-35S1, 2TC).

Evidently, there was a correlation between the approaches this teacher used to develop the learning environment, and the behaviours displayed by the students. This approach was validated by the literature when describing the learning environment of creative pedagogies (Ofsted, 2010), in that students needed to have ownership in learning for themselves to make responsible choices about their actions in the classroom, their learning and motivations. However, this classroom demonstrated only some choices for students to participate in. Prosser (2006) and Starko (2004) described that was important for teachers to assist students to discover and construct knowledge for themselves and to solve problems, by involving student with real life situations. Here, Chris demonstrated an approach to creating an engaging classroom that could stimulate creative learning by shaping the classroom context to result in numerous outcomes:

Once I put some colour posters and things up in the classroom I remember saying to the children why I was doing, what I was doing, explaining to them I was giving them a bit more ownership of their work, basing it on real life experiences they are in the work force, this is what happens when you're out in real life, this is how you behave as individuals, and you're not going to be instructed on what to do and how to do it. And through that I started to introduce the Y tool, I think after the first two weeks, I got to the guts of why they weren't coming to school, and usually they just couldn't answer it,

(inaudible) they'd say they had to come to school blah blah blah, it wasn't until I'd used that tool, that they'd come out and they just said 'oh okay, because I want to be successful in my life or whatever,' Their behaviour changed from then (Commentary 5, L22-31S1, 2TC).

However, this example of choice making as valued by Chris, was not really authentic choice making as required to wholly support creative pedagogies, rather it was a stimulus for learning and engagement. It is important to acknowledge that small steps and integration of such practices are important to the successful possible support of creativity or any innovative practice such as Chris'. In summary, Chris' approach to teaching in 5/6 classroom demonstrated the values on teaching and learning which indicated the dynamic nature of learning. Chris demonstrated expertise in meeting some of the charter priorities, despite the restrictions in the units of work planned by the 5/6 team, through applying a variety of teaching strategies to cater to student learning and ongoing development. Chris approached using Blooms/Gardner matrices to develop learning differently from the planned outcomes in the 5/6 units of work. The next step in developing creative learning in this classroom would be for the teacher to encourage students to be personally creative in constructing projects, and to work cooperatively with peers for extended periods of time (Suda, 2006; Starko, 2004; Newmann & Welhage 1995), with less teacher direction. There was little evidence in the units of work, that collaboration was a focus for achieving learning outcomes, nor was there any reference to the discourses being assessed in a way that showed developmental learning of the individuals over the time of the projects. Chris highlighted pedagogic values that enabled students to make some choices in their learning, with particular reference to the matrices. However, this research argues choice in learning is not about choosing a prescribed activity from a matrix standardised by the teachers, rather, choice is based on understanding your learning ability and style and to develop a problem solving project.

Chris had high expectations and understood the holistic development of student learning. She identified the importance of the transfer of skills and techniques for these students throughout the middle years, rather than just being able to read and write, or complete statewide standardised testing. Chris began developing a relationship early with the students, via the Feedback stations, indicating pedagogic values of students making choices, voicing opinion and being able to comment on their own learning environment. Also Chris reflected on teaching practice, as reviewed in the literature. She had recognised that this practice appeared to have changed the behaviour of students and their learning, as indicated by their own commentaries also (Case 3, Appendix 3, p. 235). Ironically, this process had not appeared to be an explicit practice outlined in units of work or the school charter, yet this classroom demonstrated approaches, through the individual teacher's practice and choices, that worked towards meeting the charter outcomes. Clearly Chris held values similar to the ideals of creative pedagogies, as indicated by the research conducted by Ofsted (2003) however they were not wholly aligned:

...a willingness to observe, listen and work closely with children to help them develop their ideas in a purposeful way...it is not always easy...[and] requires, for instance, the particular skills of listening, interpreting and evaluating, a high level of subject knowledge, and time. It also needs a particular environment: one in which creativity is recognised and celebrated (2003, p. 2).

Possibly the pedagogic choices made by Chris, were due to being more informed via Professional Development in combination with the individual teacher's ability to practicing self-autonomy (one of the skills defining *creativity* in Table 1, pp. 37- 38), as opposed to the other staff in the teaching unit. This was significant, as it was these methods which formed the strength for change that Chris attempted in this classroom, and was an approach valued and important for supporting the teaching of creative pedagogies.

### APPENDIX 3

#### **CASE 3: How do students demonstrate awareness of their learning environment? What are the contexts for the learning determined by the students?**

When students are able to show an understanding of their learning environment and their own learning, they become more aware of the processes of thinking, and perhaps *creativity*, which would be applicable across the curriculum and for their future. The type of social and self-awareness identified in this research were summarised in Table 1, as characteristics of *creativity*, and included Philosophical and collaborative inquiry (Scholl, Nichols & Burgh, 2009; Wilks & Cherednichenko, 1997; Splitter, 1995; Lipman, 1988). In fairness, these were not explicit practices used by Chris. These characteristics, if identified in the findings could show evidence of classroom practices which could support creative learning. Some of these characteristics were loosely identifiable through Chris' implementation of de Bono's thinking hats, thinking tools and other collaborative strategies. The important indicators of student awareness of learning from the findings were identified in their commentaries about the new classroom environment, new thinking tools and collaborative learning.

#### *New classroom environment*

Chris' curriculum was based on the unit of work developed by the 5/6 team, but it focused on elements of inquiry learning and thinking skill activities. The classroom learning cycled around a traditional timetable structure. Every morning started with literacy rotations, followed by maths rotations across the other 5/6 classes, and later integrated studies. However the small change Chris adapted to the activities adopted a thinking skills approach. As this style of teaching was not used previously in this classroom, Chris' early experiences with this class had shown that students were not interested in the innovative curriculum as they were happier completing work sheets. So, Chris

capitulated with this teaching style for much of Term 2. In contrast, Morgan commented on this, saying

we always used to do worksheets of find the meaning and dictionary work...it's so boring, we always have to do it (Commentary 3, L191-192S5, 6SC1).

This comment was made a term after Chris had started teaching, indicating that a shift in student values and perceptions on learning was being realised. Initially when asked in early interviews to describe what students saw in the photos, they described learning activities as what they did; such as when describing a unit of work on Government (completed in Term1 with Bernie):

we learnt about what Government does what...we did that limerick...we did some work on Government, some activities. We did this thing where we stick some stuff in our books (Commentary 1, L3-11S1, 2SC1).

Such comments do not appear to indicate a high level of metacognition or criticality of learning. However, a trend in the commentaries showed that those interviews conducted after thinking based activities with Chris, revealed a different discourse; though rudimentary in depth. Here the students started to show an awareness of the activities taught, and an awareness of the applications when using de Bono's thinking hats, and thinking tools such as BORIS and Lotus diagrams:

Researcher: When do you use the 6 thinking hats in your classwork?

Jamie: Uhm...mainly when we do work- you know, stuff like that. When you're writing or you need help, and stuff like that.

Lee: When we first got the thinking hats...well if you had one of these hats on, like imagine what it looks like. When you have the black hat on you can judge when things are bad (Commentary 1, L63-68S1, 2SC).

Jamie: It's really hard to think about what you're thinking.

Researcher: And what is that?

Jamie: Because you can't really think... you can't really think what am I thinking because you already know what you're thinking, you're thinking about thinking

Robyn: That's very confusing!

Casey: How can I think when I'm not thinking?

Researcher: (laughter for students) well you could think that you think that you're not thinking, but are you really thinking that? (Commentary 1, L55-63S1, 2SC).

Researcher: Can you tell me what Boris stands for?

Lee: Brain Origami Related to Irrelevant Situations.

Casey: Sometimes, like if [Chris] asks you a question, such as... like what makes your (inaudible) the colour white? You can't and you might have a stupid explanation, but it makes you come up why and a reason why.

Researcher: Yep and why is it important to know why?

Casey: Because you can't just come up with a stupid answer and just leave it! 'Cos you need to know why, otherwise you'll be like... why is it white and why do you like snow peas?(Commentary 1, L130-137S1, 2SC).

Researcher: Can you tell me about the Lotus diagrams?

Jamie: Well instead of doing just a journal, the use of diagrams is more descriptive.

Robyn: You just write little words about things' (Commentary 2, L148-150S3, 4SC2).

Researcher: Is it easier to think when you're doing that type of activity? (Referring to Lotus).

Dale: Yes 'cos you need to cos you get to know stuff about what we said and what we're learning, revision.

Researcher: So would you say you're learning about your learning? And how you learn best?

Dale: Mmm, Yeah.

Researcher: How long do you feel it has taken you to feel confident in doing this type of activity?

Dale We've been doing it since [Chris] was here, so.

Researcher: Was it hard when you first learned it?

Kim and Sam: Yeah,

Alex: Yes, 'cos we didn't really understand it then, but then [Chris] explained it

Researcher: Yeah, do you think you'd like to stick with what's now or go back to what you did before?

Sam: Stick with what's now (Commentary 2, L216-228S3, 4SC1).

From these descriptions, it seemed that students began to obtain some understanding about how the thinking tools were used as an aid for learning, the value of the tools to their thinking and writing, and the need for thinking. They also indicated that in their learning they needed to solve problems. In contrast, Chris expressed concern that the students were not explicitly conscious of their learning, and did not feel that what was being taught, regarding thinking curriculum, was sinking in or of recognisable value by the students. Chris personally, had not received feedback from the students in a way that made the new approaches to teaching or teaching style feel valued or acknowledged. Instead, Chris used the behaviour of the students and comments they used when handing back their work, as indicators of the progress of the learning environment.

### *New thinking tools*

The next finding from the transcripts was when students' acknowledged importance about the new thinking tools Chris introduced. The following example indicated the understanding students placed on thinking tools. Toward the final sessions of data collection, this thinking activity using Y-charts was used. Chris described:

...this was a follow up activity about a tabloid sports day again. The Y chart gives children an opportunity to pictorially represent what they saw, what they felt and what they hear. And it's interesting that they as children, that they believe, that they feel something has to be tangible, and they find it difficult that you can say it doesn't have to be tangible, it can be how you felt inside, and that lends itself to say why can't we pictorially draw anger? So it's got a bit of a balance of pictorially representing something and writing uhm in words, and it's just another way for them to express what they saw and how they felt about something, that leads to deep thinking (Commentary 7, L66-71S5, 6TC).

Kim described this activity as

...creative because you get to draw how you feel and what it's like, what the differences say... And it was thinking, because you really do have to think about what you write and draw (Commentary 3, L96S5,6SC1).

This supported the intended outcomes which Chris had of the activity. This activity presented and awareness of creative learning, but in contrast to Table 1 (pp. 37 - 38), it stimulated engagement at this stage. Chris' expectations of the learning outcomes demonstrated by the students from this activity were not those of high order thinking, indicating they would explain

...what they saw, and uhm really and I just expected them to say 'Oh children...Balls',

that sort of thing' (Commentary 7, L74-78S5, 6TC). Surprisingly for Chris, students 'went a little bit further than that. We saw descriptive things, like 'we saw children having fun', so, that's a little more of the type of thinking, the deeper thinking than just saying what, they interpreted what they saw (Commentary 7, L66-78S5, 6TC).

Chris acknowledged that the students began to take the learning outside of them, when attempting this activity. This data also reflected that this activity was novel and stimulated relevance and interest which indicated some approaches to possibly integrate a creative learning environment.

### *Collaborative learning*

The final important finding from the data identified the theme of collaborative learning and its value to the students. As the students experienced Chris' new teaching practice, they began to recognise the difference in teaching between Chris and Bernie's practices. They found Chris' approach was easier yet socially confronting at times. Some students enjoyed some approaches to collaborative learning, commenting they valued 'sharing the work load' and that 'you can learn from your partner' when doing partner work. However, in the Y chart activity recounted earlier, Alex described the whole class warm-up activity used to stimulate the thinking required, and was not enjoyable:

Researcher: Okay Did you find the rest of the activity useful, by everyone taking turns and talking about what they found good and what they found bad about all of them?

Alex: Mmm (Nodding for yes).

Researcher: But you didn't find using the ball a helpful tool?

Alex: (Shaking head for no).

Researcher: What do you think would have suited you better?

Alex: To go around in a circle.

Researcher: And do it that way. Okay uhm, why do you think your teacher chose to use

the ball?

Kim: Because [Chris] always uses the ball, when we have activities that we have to say things (Commentary 3, L22-30S5, 6SC1).

Casey had similar thoughts about the activity:

You could like go around instead of chucking it. 'Cos like, the same people will just keep getting it all the time, and then if you've said something in a circle, they can take your ideas, and then you can't say them again; yeah. It's difficult sometimes in a circle, 'cos you can't get the ball and everyone's goin' 'back, back' all the time (Commentary 3, L32-35S5, 6SC2).

While collaborative learning as whole class situations in this room, did not appear to involve philosophical inquiry or such discursive practice inquiry as discussed in the literature by Scholl, Nichols and Burgh (2009) and Wilks and Cherednichenko (1997). It was used as a way to spark or share ideas rather than as a forum for developing high order thinking and learning. While some students in the interviews indicated little benefit from whole class collaborative activities. Most often, students commented on preferring working as table groups, about six students and with partners, but not as an element of creative pedagogies. As discussed in the literature review, engagement of learning occurs through creating an environment of trust and security in the classroom. This effectively enabled the teacher and learner to focus on the issues, goals and problems that confront them. This in turn, according to Freire (1989), should increase students' creative and critical powers enabling them to perceive the world accurately, and see it as alterable. While the learning outcomes of this classroom were far from realising such contentions, at times, awareness of learning by the students, acknowledged not only the product as an outcome of the learning through such activities, but more so the processes and applications involved in achieving

some of those outcomes.

In conclusion, the ability for students to acknowledge and indicate awareness of their learning was shown to be relevant to new practices, thinking tools and collaborative learning. The findings showed that in order for students to develop an understanding of the context of their learning curriculum must explicitly focus on higher order thinking and metacognition. Clearly Chris' curriculum approaches and classroom environment stimulated engagement through collaborative activities. There were no formal evaluations for this in the classroom in terms of anecdotal assessment or written sheet for students to complete in the classroom as an avenue for assessing awareness of the new learning environment. Choo (2000) contended that 'the assessment strategy used was important to the success of the thinking innovation for unless thinking [was] assessed; the learning outcomes [would] remain an educational ideal rather than a reality' (2000, p. 7).

## APPENDIX 4

### **CASE 4: What are the indicators of creative learning as perceived by the teacher and the students? Do students participate in creative practice in this learning environment?**

The type of innovative practices which Chris introduced to the Year 5/6 area may develop an environment that could be supportive of creativity. By contrasting the perceptions of quality learning, including creativity by Chris and the students, with the ideals of creativity as referred to in Table 1 (pp. 37 – 38), the literature defines creativity as *self-identity and autonomy, non-conformity, flexibility, effectiveness and relevance, originality, risk taking and elegance of problem solving*. The data reflected the following main themes around student and teacher perceptions of creative learning: classroom environment; students' awareness of their own learning, curriculum and pedagogy, teacher and student interaction, and a teacher's knowledge. These definitions will indicate any similar characteristics as described by and analysed from the interview transcripts to see if creativity could be supported in this environment. The results will indicate whether this classroom is open to supporting creative pedagogies as an alternative authentic learning practice in middle years classrooms.

First, Chris had changed the feel and visual appeal of the classroom environment. As discussed earlier in Case 1 and Case 2, Chris had changed the physical environment of the classroom, and was giving them a bit more ownership of their work; basing it on real life experiences that are in the work force' (Commentary 5, L23-25S1, 2TC).

Chris further explained the possible creative elements in the new approaches to classroom practice as:

I probably uhm, provide stimulus for the children- initially, to throw them into what the learning context is going to be, and relate it to their own situation. I use their own personal experiences which I find children in the middle years; you're a real person, unlike when I went to school. For instance when I have a dinner party I sit down and I get the kids to help me plan a menu, and I tell them the next day what happened. And I think that's good, I don't make it up. Whether it went good or not. I think with middle years, you realize you have issues in life, you are running a real life. I'm using probably tools or skills that I'm teaching these children. I show them how I'm using them, and I think that's probably the creative practice is I would say (Commentary, L72-80S1, 2TC).

Here, Chris attempted to create a more inviting, productive and resourceful environment, which reflected student learning, *relevance* and promoted thinking skills. By displaying student work, thinking techniques and stimulus in the classroom, students were being made accountable for their learning, reflecting elements that could support *self-identity* and *autonomy* as defined in Table 1 (pp. 37 – 38). Chris encouraged contributing in meaningful ways which provided significance to problem solving or the activities at hand, as well as self conceptualising, or being critically evaluative of their learning and actions. By opening the teacher's own world to the students, it gave a sense of effectiveness and relevance to the learning context, which could stimulate curiosity. Chris was trying to promote the awareness that learning was life long and life relevant, not just for the time they are learning in Year 5/6, and in turn create a quality learning environment which could foster creative pedagogies.

The next new approaches to curriculum and pedagogy that were introduced by Chris, and could possibly support creativity were around the themes of problem solving. The data findings showed

that Chris' teaching similarly promoted elements for the elegance of problem solving as there was a process of problem solving for an idea or solution that was productive, valuable and worthwhile.

When asked if Chris' students 'recognize that creative process is happening?' Chris responded that 'I inform them and draw them to it.' Chris further explained that:

I use examples say of different companies that use tools, other children samples and adult's samples. I talk to them a lot, such as today's meeting of (inaudible) in schools too. This is the tool, and this is the activity, and this is the tool and how we might use it at our staff meeting... And that the response to doing that is it puts it in context much better than saying this is what we're doing. I don't often say: 'Right what we have to do is,' because that often becomes a mundane chore for them and they think 'Oh, I've got to do it.' [I would say] 'What would be a good idea is' or 'what do you think we could do?' and then they end up getting a repertoire of using the techniques, and then suggesting to me what they might do (Commentary 5, L82-93S1, 2TC).

In contrast to Chris' perceptions about problem solving and the students' learning, the findings across the data appeared to support Chris. The following example shows Billy's experiences in a maths class, of a problem solving exercise, where a new shape had to be created using their knowledge of specific angles:

Researcher: Okay, I'm just wondering how would you describe this type of activity?

Billy: Fun.

Researcher: Yeah?

Billy: Yeah.

Researcher: Why?

Billy: Cause uhm, I cut stuff up.

Researcher: Yeah, and what else did you get to use?

Billy: I used my imagination.

Researcher: Yeah, how did you get to use your imagination?

Billy: You didn't have to do a certain thing, you could put like a big piece where you want.

Researcher: Mmm. How does using your imagination make maths fun? Like do you get to use your imagination often in maths?

Billy: Nope, not so much in maths.

Researcher: okay, do you want to tell me where it sometimes happens? (PAUSE no answer from students) Where do you sometimes use your imagination in maths?

Lindsay: Uhm if you're making maps and stuff.

Researcher: Mmm okay, and you don't find you get to do these types of activities?

Lindsay: Not often- sometimes.

Kim: Not often- but like maybe every month (Commentary 4, L4-28S7, 8SC1).

In other examples from the findings, students continue to demonstrate their perceptions of creative learning in the following ways. Students were asked to provide their definitions of what creativity was or meant to them in a learning context:

Casey: Drawing.

Robyn: Writing.

Jamie: We imagine, we use our imagination.

Lee: Colour.

Researcher: Yeah, you colour things. And in what subjects do you normally do that type of work in?

Lee: Integrated studies.

Researcher: Integrated studies.

Lee: Do a little bit in literacy, but not much. Sometimes in maths we are creative, like you have to create stuff like a graph, or to split it in two' (Commentary 1, L84-93S1, 2SC1).

Alex, Kim and Dale described the relationship between creativity, fun, collaboration and variety as important for learning, and were largely reflected as activities and games:

Kim: Mmm okay, it would be more fun if we got to draw.

Researcher: Uhm what would make maths more fun for you?

Kim: More creative activities.

Researcher: Alright, what type of activities could you come up with, or what activities make maths more?

Kim: Games.

Researcher: Like?

Kim: (inaudible response).

Researcher: Yeah.

Kim: (inaudible response).

Researcher: Mmm.

Alex: Well sometimes we have [Chris] get in a circle and uhm [Chris] has a ball and makes a number up and we have to say facts about that number when you get it, like is it and odd number, is it a factor?

Kim: Mmm (agreeably).

Researcher: Oh okay I know what you're saying, I know what you're saying. So you find that sort of game. So if you did that game all the time in maths would that make it fun?

Kim: Not all the time.

Alex: You need a variety.

Dale: Yeah.

Researcher: A variety you think? Do you find that is true of other subjects as well, like if you had a variety of things?

Alex: If you had more variety it would be much better because you learn as well as having a bit of fun.

Researcher: Mmm.

Dale: Yeah like when you get to work in pairs (Commentary 4, L35-59S7, 8SC1).

Chris' approaches to teaching maths in a 'creative way' were identified by students as fun and imagination provoking. Kim commented that this activity was 'creative because you get to draw how you feel and what it's like, what the differences say...And it was thinking, because you really do have to think about what you write and draw' (Commentary 3, L96-99S5, 6SC1). The commonality between these students' descriptions of creativity was that they showed they were open to support some of the defined characteristics of creativity in Table 1 (pp. 37 – 38) in the following ways:

- flexibility by remaining open to novelty and variety;
- originality by maintaining sensitivity to problems and uncommonness of answers;
- effectiveness and relevance domain specificity for maths solutions and creativity in Integrated studies;
- non conformity perhaps from working collaboratively or by remaining open to novelty such as in the last maths activity, it could promote risk taking;
- risk taking which was stimulated by curiosity when creating, and not having certainty of the outcome.

The third main finding in the data about perceptions of creative learning was reflected in the teacher and student relationship. While it had been shown in the data collection so far that Chris offered multiple opportunities to work with varied materials and learning styles, under different conditions; what was significant to this success were the interactions between the students and Chris. The students and teacher were involved in a socially integrative style of pedagogy; conversations about learning encouraged both student and teacher to be engaged to take chances with each other. At times, Chris involved students in experiencing different situations to apply meaningful tools learning in class. The students also acknowledged Chris' flexibility as a teacher and the value of the Thinking tools:

Jamie: We do a Lotus diagram.

Researcher: Okay can you tell me more about that?

Dale: Uhm like about 30 something squares, and you do all the stuff you did in your holidays and your weekend or something. Instead of just writing like um, it all down on a piece of paper- it's easier.

Researcher: Why is it easier?

Dale: Because it's just like a better way to present it.

Researcher: Is it easier to think when you're doing that type of activity?

Dale: Yes, 'cos you need to- 'cos you get to know stuff about what we said, and what we're learning: revision (Commentary 2, L206-218S3, 4SC1).

These thinking tool activities, as Chris acknowledged gave them a range of techniques that they could apply to their learning. For example the Lotus diagram was open ended; there were little obstructions of conforming to a strict linguistic generic structure, making it 'easier' as concurred by Dale and Jamie. It would seem that students were engaged in creative elements of non-conformity and risk taking learning, which in turn stimulated risk taking and built confidence, rather than

completing recount activities which would not develop metacognition, as a Lotus diagram does. It was these types of experiences which showed Chris' practices to be authentic and relevant for students. Another example where students experienced not only non-conformity and risk taking, but also flexibility and originality, was during a Literacy activity which used Venn Diagrams to explore comparisons of their friends' characteristics:

Researcher: So why did you choose that format? 'Cos I noticed that a lot of people in the class picked different ways of showing their Venn diagram, and some people used squares, some people used circles. Why? Why did you choose the way that you did?

Kim: Because it's like...

Dale: Representing...

Kim: A person...

Dale: Because its representing a person because we're people, so

Researcher: Yep. And do you think that by doing the, writing down the info, you have in this way, is better than other methods? Like just writing in two columns?

Dale: Yeah.

Kim: Yeah it's more interesting.

Researcher: Or writing a story about yourselves?

Kim: 'Cos then you can use your creative skills.

Researcher: Okay.

Sam: Yeah.

Researcher: So it is easier to create with two people?

Sam: Yeah.

Researcher: Yeah? Or by yourselves?

Sam: More brain knowledge.

Researcher: Is that why you picked your partner?

Sam: Yeah.

Researcher: Good brain knowledge?

Sam: Yeah...very good friend (Commentary 2, L107-117S3, 4SC1).

The students demonstrated a use of applying creative thinking to original solutions when choosing how to represent their thinking into a graphic representation, shape or a person of the concept to express the thinking written inside the shape. Many students chose to use different methods of representation to suit their mode of communication, rather than being restricted to writing only, yet they were still limited to pen and paper conventional methods. The collaborative nature of this activity also seemed to promote creativity as it linked a commonality of excitability, relating to the choices they could make in the activity, elevating motivation and perhaps a support for exploring non-conformity within the task. It also provided a social support for students which were relevant to their experiences at this time.

The final example which further supported this notion, and revealed a significant finding about teacher knowledge and its impact of perceptions about creative learning was found in a student commentary. Carey, Robyn and Morgan described similar outcomes to Chris about the Venn Diagram activity, which was used to identify and sort similarities between friends:

Robyn: Yes it was interesting because, like, you found out about the other person. And I liked the drawing part where we got to draw their belly!

Researcher: Okay, was that an illustration you did or was that the diagram part?

Robyn: The diagram part.

Researcher: Okay (can you talk a bit louder 'cos I might not be able to hear you on the tape). What were you saying?

Robyn: We drew different shapes.

Researcher: Okay so why did you come up with that?

Robyn: So it was just a bit more creative instead of just boring circles. [Chris] said to be a bit more creative.

Researcher: Alright so when [Chris] says be creative, what does that mean to you?

Carey: Normally it means, add more things on, instead of leaving it how it normally is.

Robyn: Use your imagination.

Researcher: What else, when [Chris] uses that phrase, 'be creative'- what else does that mean to you? What else does that tell you about uhm [Chris'] teaching or the way that you're learning?

Morgan: It means, like, the way we learn- makes it a bit more fun. And [Chris] wants it to be more creative, to look good and that (Commentary 2, L43-59S3, 4SC2).

These students value the activity and the interest their teacher has in them presenting the work in a creative way. They liked making models and working together with their teacher. When asked about the types of creative work participated in class, Robyn described a replacement teacher they had, commenting that

she [was] a really good drawer, and she made us a picture, and then we got to colour it with pastels, and so we coloured it, and we used paint brushes (inaudible) stuck it above our bags (Commentary 1, L94-95S1, C2).

Lee commented that they got to participate in different activities

everyday' but found they 'really never get to do arts and crafts, because [Chris] doesn't know how to do it and we've done it with Miss T once, and that's the only time we've ever done arts and crafts this year (Commentary 3, L79-81S5, 6SC2).

Seemingly the creative skills of the teacher were also a relevant learning experience as the students wanted more participation in Arts activities (there was no formal arts program at Farwest PS), indicating that due to Chris' lack of 'artistic' ability, they seldom engaged in traditional creativity as they saw it. While the planning by the 5/6 team largely illuminated inconsistent values and understandings about authenticity, this was not indicative of the approaches or values of the classroom teacher in this study. Chris' struggles to improve the quality of teaching and learning at this time were challenging. The curriculum reflected a traditional pedagogy that was standardised, which paralleled the school's measure of priorities against statewide testing (at the time of study 2004, AIM testing), like school outcomes and generalised survey outcomes.

In conclusion, this research questions whether the innovative learning experiences used in this classroom, could also be supportive of creativity. It was evident from the interviews that the processes of learning were favoured and more enjoyable for students in this classroom, indicating that an environment that could support creativity was recognisable. Both Chris and the students perceived this classroom as being creative at times and stimulating learning. According to Ofsted (2003), 'teachers know not only what it is they are promoting but also how to create opportunities for this to happen. Usually this means providing pupils with challenges where there is no clear cut solution and in which pupils can exert individual or group ownership' (2003, p. 2). These ideas were identified in the transcripts to varying degrees. Considering this classroom was not an explicit creative practice classroom, Chris' pedagogic practice and curriculum supported some basic elements of a creative learning environment. The students' experienced some variety of learning practices where they could apply and build on knowledge; develop understandings of their own learning. In order for students to be involved in sharing the planning and evaluation of activities, this research suggests that students need to experience:

- Activities that involved larger emotions which were necessary for developing deeper

processes and higher quality creative products;

- Explicit collaborative or philosophical thinking activities which developed deeper metacognitive thinking;
- Teachers like Chris who need more creative knowledge or experience to incorporate students in drama, or role play, traditional art materials, music and so forth to stimulate learning or become products of learning outcomes.

Sternberg (2003) contended that teaching for creative thinking means encouraging students to create, invent, discover, imagine if, suppose that, and predict. From these findings it appeared that if creativity were to become a pedagogic practice integrated in classroom's like Chris', teachers would need to identify the profound differences between types of problem solving and problem generating behaviours; understanding the interaction of individuals or learners within social systems, and the particular impact of the diverse social systems (Craft, 2003; Cropley, 2001; Csikszentmihalyi, 1996).

## APPENDIX 5

### **CASE 5: How does the relationship between learning time, and flexibility of learning, planning and engagement affect authentic learning processes?**

As in most education settings, time and flexibility factors impinge on the learning environment, and in this 5/6 classroom, the impact of timetable and standardised curriculum could be seen to affect the flexibility of learning, and therefore Chris' innovative practices. These factors would in turn affect the possibilities for implementing a creative learning process. This relationship was evident from the data in the following themes of flexibility for student engagement; then time taken for student engagement; and finally a dynamic interaction between flexibility and time for planning and engagement. According to the literature summarised in Table 1 (pp. 37 - 38), teachers need to provide a set of criteria that students must meet over an extended period of time, in order for classrooms to support creative pedagogies. This signified the time factor allowed for flexibility for ongoing engagement of creative learning. It was this notion which would become the underlying theme of this case, when investigating the relationship of time, flexibility and authentic learning processes.

The first identifiable data that revealed Chris' flexibility as a teacher was evident during the interview process. There were often interruptions to the normal daily schedule of:

- sports days and events;
- overhead announcements interrupted teaching;
- and taping of interviews;
- the timetable had restrictions;
- the time lines used to complete units of work; and

- the time frames used to complete warm up activities and activities in general.

When Chris first began teaching in this classroom, time affected the content and processes taught, this resulted in how Chris felt about the progress and value of the teaching choices made. When Chris started to introduce the new style of learning, and thinking activities such as a Lotus diagram, it took longer than Chris' previous experiences had indicated to teach it:

Researcher: How long did you find that that process took to change, when kids actually started? Either was it through behaviour or did they consciously verbalise to you?

Chris: Uhm a Lotus diagram is an example for that. I introduced it- it took the children [ages, and they'd] say we're not interested. They couldn't cope that it was too 'out of' their recount style. It wasn't a recount or a narrative. Just words of writing, but they wanted to do it as a paragraph when I first did it. We did a Lotus diagram- as it turned out it took them forever. Whinge, whinge, whinge about it. Because that's not how they do their narrative recount (Commentary 5, L46-51S1, 2TC).

Here, Chris found that as the students were exposed to a new learning activity, that at the students' age of experience in understanding the processes and basic functions of narrative and recount, that they took a while to be open to, or flexible to a new way of thinking and presenting information.

Chris' re-enactment of conversations from the transcripts with the students, indicated they were not willing to be reverted back to a beginner status on a cognitive level, and seemed to be restricted by accumulated knowledge or schemas, as outlined in Table 1 (pp. 37 – 38), regarding indicators of *flexibility*.

Chris explained that:

It probably took about a term for the children to ask me 'can I have a copy of the Lotus

diagram for my plan for writing?’ That was when I thought ‘Wow’ what I’m doing is working. Maybe I’m putting it on these kids- maybe it’s me- I’d better go back. When I reflected back, on maybe 5 or 6 years in teaching, it was a culture shock for me to teach children like that, but it was a culture shock for them to have me. Uhm the last six years I’ve probably been in Prep 1/ 2; which my Preps, at this time of year, could run rings around what my 5 /6’s are doing in relation to thinking curriculum. Uhm you know it was no issue for children to use Mind Maps, without being asked, if that’s how they wanted to present their work. Uhm straightaway children would suggest using a PMI when coming after an excursion- 5 and 6 year olds! And I gather if nothing gets ‘killed’ in the process, by the time they get to middle years, they will have a grasp on the tools to enhance their learning (Commentary 5, L46-62S1, 2TC).

The next significant factor that affected teaching and learning was the teacher's expectations for student engagement and flexibility. Chris identified that the learning process of thinking curriculum needed to be a continuous process, and with regard to *flexibility*, as outlined in Table 1 (pp. 37 – 38), this was also an important factor for developing or supporting creative learning. While it took Chris' Year 5/6 students a term to independently choose to use the Lotus diagrams as a writing tool, as compared to the seemingly more adept learning of the Prep 1/2s taught earlier. Chris did not acknowledge that the age difference and exposure to learning were factors which could have attributed to this, as Prep 1 /2 students would have largely been exposed to Chris' pedagogy and curriculum only. At this age in their learning, the Prep 1/2 students have had a relatively shorter time, compared to the 5/6 students to develop more entrenched schemas for learning. The new learning environment for the Year 5/6 students would have been a culture shock, and perhaps resulted in Chris questioning and validating the way curriculum was taught. The relationship between time and expectations of learning, and the type of thinking processes required by Chris'

curriculum were clear:

Chris: You don't move so quickly- right, because you get disheartened, all children have the ability, but if you move as quick as you want- you lose them (Commentary 6, L167-168S3, 4TC).

In the next week or two the children were getting book reports for homework and the assessment criteria are based on Blooms/Gardener's activities; and they have to acquire so many points and that's how I'm doing it. I'd like to be in a position where they can choose their intelligences but they haven't had enough work. They need to be taught (Commentary 5, L135-139S1, 2TC).

It appeared that Chris found that the expected time it took for students to develop new processes of thinking and learning affected both the teacher's sense of self and judgement as a teacher. Chris was frustrated at the amount of her curriculum which needed to be covered, so that students could be at a level to engage in learning with ease and make choices for their learning using the techniques and tools taught. All in all, Chris indicated that it took two terms for the daily changing process to show results of change and acceptance (Informal Questionnaire 2, August 2004).

Chris stated,

I don't make any secret of it, but I do refer to [the] children, and I tell them, that if they are not benefiting- by how I'm teaching, or if they are not seeing the benefits- then I will quite easily allow them to rule up their pages and do dictionary meanings. [A literacy activity and classroom management strategy familiar to the students from previous teachers]. At first they [say] 'Oh but the other grades use dictionaries for dictionary meanings,' [I told them], that's great- is there another way we could do it

(Commentary 6, L60-62;68-69S5, 6TC).

Chris used this strategy as well as mathematic algorithms (another comfort zone),

Every day for quite a while...and then if kids are not cooperating, but if they're not feeling that, like, they're benefiting... then I'll just say let's do the dictionary meanings now. They're both the same thing (referring to the alternative thinking curriculum based literacy activity), what would you prefer to do? And nine times out of ten they don't want to do dictionary meanings (Commentary 6, L47-78S3, 4TC).

These examples illustrated the emerging pattern of the relationship between flexibility and time when developing students' learning outcomes. Alex, Kim and Dale were asked to reflect upon time constraints in relation to learning, they also identified the product and process of learning quality as being restricted by this factor:

Researcher: Okay, do you think you get enough thinking time at the beginning?

Alex: No, not really.

Kim: We think while we work.

Alex: We don't really get much time to work really.

Researcher: On these types of activities? (Being thinking tool based activities)

Kim: Yes.

Researcher: Okay, how important do you find that is for you? Do you think that it is important to think at the start or do you think you learned what you needed to learn out of it while you were doing it?

Alex: Uhm, you learn what you need to learn, but you might also need to use more thinking and work time.

Researcher: Mmm.

Kim: You don't always need to finish it exactly, but you still need to have more time to think about what you doing.

Researcher: Mmm that's fair enough. What do you think?

Dale: You're not really learning because you're just doing your work .

Researcher: Okay, so what does learning mean to you then?

Dale: Something new (Commentary 3, L123-138S5, 6SC1).

The students described the value for engagement in the process of their learning, rather than the product, and recognised the importance on thinking time during the work in progress, rather than just the planning time. It seemed that the students placed value on the time used for the processes involved when ideas were being freshly created, and required more immediacy to start developing those ideas. From this realisation, students also demonstrated the recognition that learning was something you did, but the value was in the exploration and engagement of something new which took time. Interestingly, students did not appear to place all their value of their learning and time management on the product. This research questioned that the assessment measures utilised by the teacher and student needed to reflect this idea to maintain flexibility within its structure to reflect learning outcomes as they were met.

The next important finding from the data drew on an analysis of the dynamic relationship between flexibility and time, which affected learning. During the learning process Chris revealed the following understandings and observations of the students' motivations and learning processes with relation to time:

Researcher: Are there any particular learning techniques that the kids are focusing more on using at the moment?

Chris: Initially there was a lot of concept mapping, and dot pointing and what not. And

look I think it's because it seems a lot less work. And I allowed that to happen initially because less is sometimes better. The quantity was less by the kids, but the quality was improving in what they were doing.

Researcher: How did you identify that quality?

Chris: Uhm, they would sit and talk about what they were doing. It was more significant what they were coming up with. Five dot points was better quality, that half a page of writing. Because that half page was 'and then, and then, and then,' and then they would talk about what ever context we were talking about. Yeah, I think that was probably...yeah the talk. Uhm I have a very...I don't have a quiet classroom, I don't have an out of control classroom, I have I think, well sometimes they talk about nothing to do with the classwork. Generally you know I like to hear them talk about what they've learnt and why they're learning, and where they're aiming to at the end. That's probably what I like to hear. I can't keep away from their talk of preparation for secondary school learning or from grade 5 to grade 6, full stop, that's it (Commentary 5, L94-111S1, 2TC).

Again, this sample indicated the value on the time spent during the initial thinking or planning process. As students had the time to practise and master their skills and applications to new types of learning, it seemed that a higher quality of work was produced. The process was clearly valued by the teacher, as Chris demonstrated flexibility during the learning process via drafting, use of dot points rather than half pages of writing which catered to many students' abilities; however there was no assessment to measure it. The students also valued the flexibility of drafting, indicating it was easier however they had not indicated that they valued it as creative:

Researcher: In what you call a bad copy, uhm, the rough copy, what's more creative, doing the rough copy, or the bad copy, or is it more creative to do the final good copy?

Robyn: The rough copy is easier, cause you can do all this stuff and it doesn't matter if you muck up, cause like you still need to do the new one, cos this is just your rough copy (Commentary 1, L118-126S1, 2SC1).

Chris continued to demonstrate flexibility to the product of student learning also:

Chris: The children are choosing the type of Venn diagram they're going to draw and they're going to represent and there's another photo where, I think it's over here, where uhm shows [Dale] or whoever it is not quite sure how [they're] allowed to represent [their] Venn diagrams in pictures, and [they were] coming to me and [were] asking me if [they] could do a different background and I allowed [them] to, as long as [they] gave me the required information representing the info in a typical Venn diagram, it didn't disturb me how they wanted to present it. Some children wanted to place information in images of hands and big fat bodies some of them drew squares because they didn't feel comfortable tracing circles. And it showed that once they got a hang of the content and the process about how they went about representing the information, which soon the actual Venn diagrams were depicted (Commentary 2, L16-26S3, 4TC).

It seemed that a pattern resembling continuum of time and flexibility resulted in students engaging in practices of being original, which shows that this classroom could support elements of creativity. These students knew that they were encouraged to try new things due to Chris' consistency and the consideration shown to the students during regular class operations, which fostered a supportive learning environment:

Robyn: I'm asking [Chris] if I can um do a little t-shirt with writing on it so it looks more like a person

Researcher: And what did [Chris] say back to you?

Robyn: [Chris] said yes, so long as you've got the things, all the information down.

Researcher: Okay, how did you find [Chris'] response?

Dale: Um pretty good 'cos well...

Researcher: What if [Chris] would have said no?

Dale: Well I probably wouldn't have liked it.

Researcher: Okay.

Dale: And [Chris] hardly ever says no.

Researcher: Okay why is that?

Dale: 'Cos if we ask to borrow something of [Chris'] table like [Chris] says yes.

Researcher: Okay so that's when you borrow equipment. What about when you've got an idea that you want to try?

Dale: [Chris] takes it into consideration (Commentary 2, L134-149S3, 4SC1).

The relationship between flexibility and time had revealed a significant finding for this research, where it seemed clear that the regular classroom practice in Chris' room had provided an environment of trust and risk taking. Chris explained this and acknowledged the specific programs and activities used to stimulate this environment to further approaches perceived by Chris to be creative processes:

the DOVE guidelines have already been put in place, you know no put downs, times of response that the children are allowed to have, and they've been through the BORIS process as well. Uhm and it was about the likes and dislikes about the day as well as describing things that had been seen, or how they felt, uhm or what the good things were, what bad things were, ways of improving. And this was actually a precursor to some further activities, and the, I found I used to get responses from the children that the day was good or I used to get negative responses about the day. And that's okay, I

didn't mind their responses, I didn't care how good the day was. What I cared about again, was the process of how they can express their opinion on something, instead of just uhm recounting the experiences; it was to delve in a little deeper into thinking why the experience was good for them, and why it wasn't good for them. Ways that it could be improved, and suppose, like I said I think that the children at first were used to just coming in and bagging and venting, I thought I'd be really clear about it, when they realize that there was a reason, no matter whether they liked it or not, there was work that was going to be done on the topic (Commentary 7, L20-27S5, 6TC).

In conclusion, while this classroom was not an explicit creative pedagogies environment, of those indicators that possibly resembled teaching and learning for creativity, it revealed that the factors of flexibility and time and persistence when applied to new pedagogic practice could result in an environment supportive of creative learning. In this classroom, the results were small in many instances. To Chris' credit in a learning context that was initially set in its ways, shows some progress. It was apparent that the processes identified in the literature and Table 1 (pp. 37 - 38) of time, *flexibility* was achieved to some degree, by Chris' approaches to pedagogy indicating the possibility of creativity being supported. The students and teacher were engaging in elements of creativity, though not explicitly, as both were active participants, involved in changing their learning, bringing different levels of interest to the task. This, according to Cormack, Johnson, Peters and Williams (1998) and Covington (1998), reflected the need for flexibility and time of the teacher and learner as well as the unpredictability in authentic learning, which provided for multiple opportunities for students to succeed. Hargreaves (2000) argued that

...learning takes time. Teachers plan for it to occur over large chunks of knowledge and over extended time periods and with a diversity of other resources made available. Learning appears to be richer when students are in situations where they

are encouraged to work cooperatively on tasks with the potential for ongoing inquiry and choice and experimentation in what students might work on (2000, p. 107).

## APPENDIX 6

### **CASE 6: What are the motivations for learning which could also support a creative learning environment?**

The motivations to learn in a different way for both Chris and the students were based on intrinsic and extrinsic factors which could also support creative learning in this classroom. This case explored the relationship between those factors and whether they motivated Chris and the students to engage in practices which could support creative learning. The themes that were shown to be positive motivations for stimulating learning included: participating in interesting activities that included students having choice; risk taking; collaborative work; peer and self-evaluative assessment. This is followed by a discussion of the data which presented as unmotivating factors that would greatly restrict any creative practice in a learning environment.

#### *Participating in interesting activities*

While Chris' classroom was not focused on a creative pedagogies environment, many new learning experiences which were stimulated and seen to be more interesting and creative (to varying degrees). Students Jamie, Robyn, Carey and Morgan identified a range of activities they enjoyed in the classroom:

Sometimes we get the radio...(Researcher: Okay do you think that helps you?) Yes sometimes because if we like what we're doing or we like what's in the background we might work harder...Uhm, sport...Creating, drawing...Making things like models and that (Commentary 2, L15-23S3, 4SC2).

It was clear from this data that that the curriculum needed to impart the desire and pleasure for

learning, the ability to learn, how to learn and intellectual curiosity in order for students to become engaged in learning. Chris described:

Their behaviour changed from then. And then I find that they really, I believe that children's behaviour in the classroom is attributed to the classroom program, so if the program is one that is interesting and engaging children where they can realise what they've learned and they learn that they all don't learn the same, then it is an indication that you have a child that is more acceptable (Commentary 5, L31-35S1, 2TC).

I always reflect back on my own teaching, which I do often enough! (sarcastic tone). However, there's been times where it is out of my capability, and I pull worksheets out and I don't make any secrets of it, it's common knowledge and I just cart them, Not that they enjoy it anymore, they initially enjoyed that type of learning; and now that they've seen the other side of it, they're not happy with that. And that I suppose, well that's the consequence of their behaviour- they say 'Oh, we don't want to go back to this, whereas initially they said, 'Yes that's what we want.' And after half a day, they go back to saying, 'No, no we don't want to do it like this' (Commentary 5, L22-43S1, 2TC).

Clearly Chris understood the power of the curriculum used in this classroom as an extrinsic motivating tool for student management, as revealed to Chris when students recognised the program's impact on themselves and their learning. If too few opportunities for curiosity and exploration of an idea were available, and too many obstructions were placed by Chris, then the motivation to become engaged in quality learning would become easily extinguished; this is also true of creative pedagogies. When Carey, Robyn and Jamie were asked to explain how Chris' Thinking tool used as a brainstorming idea, the Plus Minus and Interesting (PMI) they described to some degree, the intrinsic motivations they experienced:

Carey: Uhm, we think of stuff.

Robyn: We do good stuff, things that we find interesting, our interests.

Researcher: Okay and how do you apply, or what do you apply this to, is it just to anything, you do?

Jamie: We can, like, think what they do or are, if they are plus minus or interesting.

Researcher: Why do you think that's an important tool to use or is it a valuable tool?

Jamie: It's like an easy tool to use...

Robyn: I like the diagrams.

Jamie: Because like if it was fun you could just put it in plus, and if it was like interesting, or if you'd never heard it before and didn't like it you could put it in minus- so it's really easy.

Researcher: Okay when you uhm do your classwork, do you see this picture in your head when you're trying to think in that way?

Carey: Sometimes.

Researcher: Or do you go up to the board and look at it and use it?

Carey: Depends on what mood you're in.

Robyn: Depends on what work you're doing.

Researcher: Okay and if you didn't have plus, minus and interesting as a strategy to use, what would you use instead?

Jamie: Uhm probably the uhm,

Carey: The one with the question mark.(other students didn't really have a response, laughter) (Commentary 1, L12-30S1, 2SC1).

Here, this dialogue described that this example of learning tool provided the stimulus for engaging in learning behaviours. It seemed useful for students that the information of how the tools were

used, to be on display in the classroom, as a reminder or stimulus for students to choose whether or how to apply that tool to a learning situation. Although thinking tools used in maths, as previously described, had stimulated learning, Robyn, Morgan and Carey described the type of activities they would have also liked to experience in other subject areas such as in maths:

Robyn: Yeah, well we get to like draw all the time, I like making stuff out of finger paint, and dough or clay- Kindergarten stuff.

Carey: Yeah, but it's so cool.

Researcher: Do you ever find that there's times where you might be listening to [Chris] during English or Maths, and you think, I could so make something for that? Maybe in Maths you could sculpt something or paint your understanding about that.

Morgan: We don't get to because they make us do these other things.

Researcher: Yeah but what I'm saying is, though, do you, is there any time where that sometimes comes into your head where you go, I really wish I could be doing this about that.

Carey, Morgan, Robyn: Yeah.

Carey: Not in maths.

Morgan: Yeah.

Researcher: In maths you might not do it, but I'm saying...

Morgan: Yeah like in maths we used cardboard paper with cut and paste, and I cut it like that, [Carey] can explain.

Carey: (Laughter) You can...you can get carried away! (Commentary 3, L94-109S5, 6SC2).

It seemed that these students enjoyed hands on creative activities, even if they regarded themselves as being too old for 'finger painting' and so forth. However, this was an important comment, as it

indicated that for these students, they were still willing to revert to a beginner status and be flexible; which are important attributes defined in Table 1 (pp. 37 - 38) for supporting creative learning. Morgan's initial comment referring to 'they make us do other things,' was interesting, as this student showed that choice was not always given as to how they might develop learning, rather that the activities were planned for them.

### *Student choices in learning*

The next important finding from the data showed that students were motivated in some ways, by the ability to make choices in their learning. The data revealed the motivation that engaged students in a Numeracy thinking activity was based on a Venn diagrams was student choice, as Chris described:

The children are choosing the type of Venn diagram they're going to draw, and they're going to represent. And there's another photo where [it] shows [Dale]...[and] how [they're] allowed to represent [the] Venn Diagram in pictures. [Dale] was coming to me and...was asking me if [they] could do a different background and I allowed [Dale] to, as long as [Dale] gave me the required information representing the information in a typical Venn diagram...it didn't disturb me how they wanted to present it. Some children wanted to place information in images of hands and big fat bodies some of them drew squares because they didn't feel comfortable tracing circles. And it showed that once they got a hang of the content and the process about how they went about representing the information, soon the actual Venn diagrams were depicted (Commentary 6, L16-26S3, 4TC).

Chris recounted the externally motivated choices Dale made in this Thinking activity. Dale commented about this, which confirmed that 'choice' was an important motivator for learning:

Researcher: Okay, but if [Chris] would have said, 'No, sorry [Dale], you can't do a T-

shirt on your person.' What would you have resorted back to doing? Would you have tried something different?

Dale: I would have asked to do something different. If [Chris] said 'Yes,' then I'd do it.

Researcher: Okay, so why is it important for you to try and show your work in a different way?

Dale: 'Cos...it makes it interesting.

Jamie: Yeah (Commentary 2, L171-177S3, 4SC1).

Due to the development of the relationship of trust between Chris and Dale, this student knew Chris valued Dale's choices and worth as a learner. It was interesting that Dale exemplified the notion of Chris' 'consideration,' and related the 'trying ideas' or risk taking, and trust from everyday classroom occurrences such as sharing equipment, rather than any profound curriculum learning experience. Perhaps for students in middle years, such simple social behaviours could have established a stage of motivation through a safe and trusting environment to take risks in and trust the judgement of the teacher, which are motivations for supporting creativity.

Csikszentmihalyi (1996) asserted 'students generally find academic subjects threatening or dull; their chance of using their minds in creative ways comes from working on a new student paper, the drama club, or orchestra' (1996, p. 12). To boost students self-confidence and openness to the future, they need to be educated to be original as well as competent. This was evident in Chris' thinking based activities where students were engaging in activities that had not always involved writing, or in this case algorithms and bookwork. The next example also demonstrates students who were motivated by choices made during the process and product of learning. This Venn Diagram activity enabled the students to actively make choices during the learning process and for the product:

Jamie: 'Cos sometimes, well we done a flower, and we thought with circles you can create lots of things with it

Researcher: Mmm.

Robyn: I did a square because we found a nice shape, square size to trace and we needed it.

Jamie: Yeah.

Morgan: We sort of chose ours 'cos everyone else was doing circles.

Researcher: Okay, do you like being able to have that choice?

Morgan: Yes.

Researcher: Do you get to make those choices often in these sort of activities?

Morgan: In these sort of activities, but we don't normally do it (Commentary 2, L140-144S3, 4SC2).

It seemed that choice for learning processes as well as trust of Chris made the process and product more 'interesting,' students were motivated to engage in further activities which may have had similar learning experiences. However, if the thinking activities enabled choice, and motivated learning experiences where students wanted to demonstrate ownership, trust, risk taking and originality, should all activities have enabled students to do this, with particular reference to Morgan's final comment? This research also questioned whether this notion could be sustainable for the quality learning practices in this classroom, or even creativity, given the current curriculum and timetable restrictions.

### *Risk taking*

Collaboration was the next meaningful theme identified in the data that motivated learning. Alex, Dale, Jamie and Kim continued to show that choice, originality and risk taking were important

motivations for learning, and could also be supportive of creativity particularly when they worked collaboratively:

Researcher: So you went from having a discussion [with your partner], and what happened next?

Alex: Well we thought about it and we thought we might just write em down...instead of just getting all our differences, we'd write em down.

Dale: We got to do these little characters of ours, and words it tests our colouring skills and all that 'cos we were colouring in...inaudible. 'Cos usually we'd just write.

Kim: This is a better way to do it, because, like- I dunno, it's interesting (Commentary 2, L97-107S3, 4SC).

Researcher: Okay, so why is it important for you to try and show your work in a different way?

Dale: 'Cos... it makes it interesting.

Jamie: Yeah.

Researcher: Interesting to who?

Dale: To all of us.

Researcher: To you personally? Or is it important for it to be interesting to you while you're doing it, or uhm, the way it looks when you've finished it to everybody else?

Dale: Probably both.

Researcher: Yeah?

Jamie: Yeah.

Researcher: What makes you say that?

Jamie: Well 'cos it just looks more better.

Dale: Yeah, if you have your own comments you should, like, share it with other people

and see what they say... and people take more notice when, uhm, it's all presented in a very nice way (Commentary 2, L176-185S3, 4SC1).

While the characteristics of creativity in Table 1 (pp. 37 – 38), are largely ideals defined by the literature, there are some elements of motivation identified from this sample which could support some of those definitions such as:

- *Non-conformity*, where these students described the commonality between interest or excitability, *Non-conformity* and *risk taking* and creativity, was evident as an extrinsic motivation when students worked collaboratively.
- Working with peers motivated the creative processes of *flexibility* also, as students were willing to revert to beginner status, both cognitively and socially.
- They were willing to consciously recognize inadequacies in what they knew and what they could do, and showed the ability to work with others without a fear of losing face (Table 1).

Further examples of this were shown in the following dialogue, particularly when Jamie commented about learning from your partner:

Researcher: Did you find, do you find, and this is for all of you, how do you find working with a partner?

Jamie: Much more easier.

Carey: Yes.

Robyn: And it much more fun.

Researcher: Okay.

Morgan: When I work on my own I don't get as much work done as if I work with a partner.

Researcher: Why do you find that?

Morgan: Because I usually sit on a table on my own and had a lap top, but now I can sit at a table.

Carey: It's more easier with a partner 'cos if you don't understand something, you just can explain it to them and see if they understand it and that.

Robyn: Yeah.

Jamie: You can learn from your partner (Commentary 2, L102-114S3, 4SC2).

### *Collaborative learning*

Elements of collaborative learning were part of the new practices adopted by Chris. This learning environment motivated *risk taking* behaviours and trust in others that you could learn from them, and their own ability when solving problems. Chris indicated that:

my research and my readings about numeracy that most children learn a lot from parallel learning, learning from their peers. And I do this also in small groups, where it's very mixed ability in maths. And because they're preparing their own response in their head, they don't have time to put other children down too, you know, they listen to what they say; they make a connection to the answer, but they're not inclined to bag or put anyone down for how simplistic their answers are. When they're trying to give their answer, the thinking is more spontaneous (Commentary 7, L52-61S5, 6TC).

Here, Chris acknowledged that thinking during activities like Venn Diagrams which involved focused on the learning process, was more spontaneous and of a higher quality than during some non-collaborative activities during numeracy. Chris also encouraged elements of collaboration in other subject areas, as demonstrated in the other activities observed during the study.

### *Evaluation and assessment*

The final positive motivation for learning that could also support creative learning practices in this classroom was of the new evaluation and assessment strategies applied by Chris. On the whole, it appeared that students were beginning to be self and peer evaluative on the process and product of their work. This seemed important to the students not just to receive the teacher's assessment. Chris explained that the assessment used for the curriculum was based on a range of strategies:

The students also have the opportunity for self-assessment and peer assessment using guidelines that have been developed in the class. The environment of the class is important for this to be successful. Following DOVE guidelines (tool for brainstorming) assists with setting up the appropriate environment for successful peer and self-assessment- all ideas are valued and students listen effectively to others' and value each other's opinions (Informal Questionnaire 2, August 2004).

Criteria for assessment is always visible to children after its creation– I either represent the criteria as a poster in the class or each student has their own copy to use as a guide, to assist them in their learning. Developing criteria with students enables them to keep track of expectations and provide opportunities for them to strive to achieve maximum learning (Informal Questionnaire 2, August 2004).

While this classroom had some peer and self-assessment strategies, Chris' assessment was after the product had been created, not during; nor were any of the dialogues or explicit thinking processes assessed. If students were to be engaged in creativity processes then it would be important to measure and ascertain the development of a student's creativity process and thinking. It would also be important to the process of creativity that students would not be discouraged by extrinsic motivations of expected evaluations, reward and deadline, as solely determined by the school

culture (as defined in Table 1 (pp. 37 – 38) inhibitors for risk taking).

Just as there were factors of Chris' new pedagogy that motivated learning and showed support of a few elements of creative learning, there were also those which unmotivated it and would therefore inhibit creative learning. Some collaborative learning strategies used by Chris were also shown in the data to unmotivate learning for some students. As previously discussed in Case 3, the activity which used a ball game to stimulate brainstorming had both motivated and discouraged students due to social issues at this age of the middle years. Both Chris and some of the students described their perceptions of this game. Chris detailed the reasons and desired outcomes behind the introduction of this activity to the curriculum:

Chris: Okay I find if we just do some general talk about an activity or an event (this was about the tabloid sports day that the children had), that some children don't participate, and other children feel a bit intimidated to orally contribute or may not have anything to say. And those children also manage to avoid writing. So for those children to go back and to just write about the experience they don't feel that they can write something- contribute something valuable. So I find I like to send the children into a circle and I turn it into a bit of a game. It is based on word recognition to describe uhm a word or a, using adjectives, using actually anything that they want to say about the event that happened. And of course all the DOVE guidelines have already been put in place, you know no put downs, times of response that the children are allowed to have, and they've been through the BORIS process as well. All the creative processes are in place and are being built upon (Commentary 7, L5-15S5, 6TC).

I find that children are more inclined to hold out when their hands are up, or if you choose a child to contribute, they'll say I don't have my hand up and then you put them

on the back foot by saying. It doesn't matter if you didn't have your hand up...they really don't want to participate. Whereas when their idea is that they're bouncing ball, they've actually forgotten that they are really having a conversation, they're focused on whether they're going to get the ball bounced to them next (Commentary 7, L31-40S5, 6TC).

Carey explained from the photos that Chris

...is playing one of [Chris'] games. Where you have to throw a ball to say what you think about the Ball-a-thon. Robyn continued, that Chris 'is explaining what you do about the ball-a-thon and then you just have to chuck it to someone.' Carey indicated that there were problems with this activity, 'sometimes we get in trouble if we take too long on something.[and] I hate getting in trouble.' Interestingly, Carey said the 'trouble is from [Chris] and everyone just says (imitates a fed up sighing sound), and then if this had happened, 'everyone just has to sit down' 'because it uses too much thinking time' (Morgan) (Commentary 3, L2-28S5, 6SC2).

Carey offered a solution to this problem in Case 3 of taking turns in an orderly manner, rather than leaving it up to the ball holder. Even though many of Chris' aims were achieved by the students in terms of participation, the pressure that enabled the game to run smoothly had unmotivated some students in this type of activity. According to Carey, this game was usually applied during maths. Despite this notion, Robyn had enjoyed the activity, and described it as

hard [because] it was challenging and something different...it's fun to do something different...once I got to know how to do it'. Although Morgan, Carey and Lee agreed that the activity was less enjoyable because, 'when have to go in the circle, the ball always gets passed to them instead of us (Commentary 3, L2-50S5, 6SC2).

Perhaps a variety of brainstorming games could have been used in this situation where it was less socially or peer restricting, particularly as these students enjoyed the challenge of something new or different.

In summary there were many factors in this classroom that were shown to have motivated and stimulated learning. There are also many positives about Chris' classroom that suggest possible starting points to support elements of creativity pedagogy in this classroom. The literature asserted that individuals or learners were likely to adopt a more creative approach to their learning if they were initially intrinsically interested in the activity itself and if their social environment would not demand a narrowing behaviour into the process and production of learning outcomes (Anderson, Greeno, Reder & Simon, 2000; Amabile, 1990). Starko (2004), Sternberg (2003) and Covington (1998), acknowledged that intrinsic motivation was necessary for sustaining creative effort and to derive reward from the activity itself rather than the product only. In this classroom Chris drove the curriculum to provide both extrinsic motivators for learning and opportunities for intrinsic motivations to develop and increase student engagement. Chris explained that

Of course, positive reinforcement such as extrinsic rewards are used, however I am a big advocate for promoting intrinsic rewards for learning – reflecting on learning for self-improvement and life-long skill (Informal Questionnaire 2, August 2004).

It was clear that through the engagement of collaborative learning, for some students that this reflective ability and awareness for learning and motivations had slowly begun to develop.

Throughout the cases thus far, there was a recurring theme about the relationship built between student and teacher that created a type of stability for this learning environment which would enable

Chris' innovations to develop and possibly support creative pedagogies. Chris' approach to developing assessment engaged students in a modelling process for behaviours and learning procedures, and supported the schools or classrooms' symbolic rules. It also allowed to varying degrees, the students to bring novelty into the learning context. The question of whether all activities should be creative and motivating was interesting, as *variety, enjoyment, fun, ease, and challenge* were all descriptors used by the students of the perceived creative activities in Chris' program. Perhaps variety and achievable challenge may be key factors to meet these outcomes and provide a more supportive base for creativity and overall engagement.

## APPENDIX 7

### **CASE 7: What are the effects of the school context on the teacher in this classroom, and how does it impact on innovative teaching practices and the possible support for creative pedagogies in schools bound by a standards based curriculum?**

The school culture at Farwest PS affected Chris' attempts to introduce innovative classroom practice to the Year 5/6 area. These effects on Chris' practices also influenced whether creative pedagogies could be supported in school environments bound by standards based curriculum. Farwest Primary School, located in Melbourne's outer west, aimed to provide its students with an education from which they would acquire the knowledge skills and attitudes that fostered purposeful and ongoing learning, a respect for themselves and others and the ability to be responsible and effective citizens. According to its charter, Farwest Primary School fully supported the Community Schooling Planner developed by the local council. This plan stated the importance of the lifelong education for this community. The school context in this case was Farwest PS and included Principal Pat Jones, who was newly appointed at the commencement of this research, staff, and other students/class. It also included curriculum and pedagogic practices that would reflect the charter, the school community of parents and families and school council. The significant school elements that affected Chris' practice and the possibility of supporting creative pedagogies were collated into themes influenced by the principal, general school culture, other staff and the Year 5/6 planning team, students and parents.

First, the commencement of Principal Jones' employment impacted authentic practices by the employment of Chris, which was rationalised to have brought innovation and change to the school.

The principal viewed the school as a

School run down in physical appearance... and... [a] lot of teachers who been at the school for a long time were resistant to change' (Informal Questionnaire 1, June 2004).

The initial change Principal Jones had planned to implement at this time included:

'Many processes from a management point of view needed to be put into place (Informal Questionnaire 1).

These values affected Chris, in terms of pedagogy practiced, curriculum and planning, motivation and self-autonomy as a teacher, while Chris was to lead change, there was confrontation with mixed experiences that were not all positive. As described in Case 1, Principal Jones wanted Chris to implement fresh ideas into the school....knowledge and experiences in innovative teaching practices; Broad curriculum knowledge' (Informal Questionnaire 1).

Chris found the duration for introducing and developing new ways of learning to this classroom and 5/6 Team difficult and longer than expected, and to varying degrees of success:

Researcher: How long do you think it has taken for you to break down those barriers?

Chris: Uhm at least two terms. Yeah, I don't know- if the circumstances would've been different, if I hadn't come at the end of term one, if they would have been different. If I'd set the scene a little earlier or had been there right from the word go. Or even if I wasn't new to the school, where my expectations were filtered through the school. Or 'if I go into [Chris'] class this is what they do,' you know those sorts of things get around to children ready for a little bit of change, and something a little bit different, rather than being hit with it straight away (Commentary 6, L47-55S3, 4TC).

The next important finding in the data was the effect of the school culture in general and on Chris' practices. The school culture seemed resistant to change, Chris acknowledged that if change had been implemented at the beginning of the year, rather than after term one, the changes would not be so unexpected and there would have been time for everyone to become accustomed to new ideas. Not only had the students in Chris' class dealt with their own flexibility issues in learning new ways, but they were standing out from their peers. Students knew that their approaches to learning were different from those in the other classes (Case 1, Appendix 1, p. 217). Chris' expectations were inconsistent with the general school culture at this time, which affected the innovative practices and pedagogy:

I've also come from a setting where we used a Blooms/Gardner's planner with a negotiation of activities between the children and myself. I was excited about working with Year 5/6s because I had found younger children couldn't completely do their own planners. And then I came here with a Bloom's, Gardner, de Bono background, and nothing in that context. Uhm I found out that these kids didn't know much about those things and [threw] it out the window, rather than to take it any further. I'd rather them understand what the thinking tools means and all that jazz. Although as a teacher I planned like that, and the activities were still based like that- they were still covering all sorts of things (Commentary 5, L126-135S1, 2TC).

Early experiences with this class showed Chris that the students' learning had been impacted by the school culture via inconsistencies of perceived achievements of success. Chris found that even with standardised testing, she had to be flexible and patient when planning. So Chris altered the expectations of student learning outcomes when a pedagogic approach was unsuccessful at being accepted by the students:

like [statewide testing] that uhm a lot of teachers look at a piece of writing and they say

oh, this is worth a 4 point 1, when you read the writing it's a very basic constructed text, but they, a lot of teachers would be happy with how they were presented. And I know of a child in another class who was an integrated child and in actual fact you had to almost decipher every word, but once you did the content of that piece of writing was phenomenal (Commentary 6, L34-39S3, 4TC).

Chris continued to explain the problem of the different values other teachers placed on the presentation, or product of student learning and how it impacted students' learning:

Unfortunately this group of children have been faced with that in the past and I think they think it's pleasing the teacher if work is presented and well the teacher did their diagram with two circles that must be the right way, and that's that way I'll do it. So I think I'm starting to break down those barriers, but at times I think children should value their work and perhaps that they don't just do it for the teacher, and that the teacher also values the process of how they've achieved some of the learning (Commentary 6, L41-46S3, 4TC).

It seemed that the inconsistencies across the different teachers interpretations could have been due to a lack of teacher knowledge for objective assessment, which supported the initial rationale for Chris' employment. This research questions how schools could deal with maintaining consistency of methods, particularly for standardised testing. If these tests were able to be subjectified, then what value could these tests be for both accuracy and representing student ability? Principal Jones had commented that

...some staff cater beautifully to different pedagogical approaches, and students in these rooms are catered for in a much broader sense, preparing them for the world- effective and purposeful teaching (Informal Questionnaire 1, June 2004).

Principal Jones expected to change the school's culture by introducing and exposing it to new professional knowledge and expertise by Chris, however, it was not always favourably acknowledged by peers and particularly, the 5/6 team she planned with. Chris described:

Team planning was extremely frustrating. My experiences and level of expertise was much greater than any other team member. This to many teams would be beneficial and acknowledged in a very positive manner. The team I worked with didn't share these beliefs. There was a sense of threat within the group. I had many experiences to offer, supported the staff as best I could, provided many resources etc, however the team, although pleasant enough to me held the belief that the innovations and 'quality' learning tools I was introducing had been tried before, so therefore held a very 'ho-hum' attitude. There was very little professional dialogue about student learning at team level, another thing I found frustrating (Informal Questionnaire 2).

The team members had not engaged in innovative or authentic pedagogies themselves and found Chris' approaches confronting. The planning of curriculum was fraught with difficulty when she introduced new approaches to pedagogy:

Each team meeting I planned to introduce a new tool for learning that I had used in my classroom. I prepared a template of the tool, an explanation page where and when the tool could be used and students' work samples, showing how the tool was used. The team was appreciative and grateful with what I supplied; however there was very little evidence that there was any trialling within their own classrooms. Term planning was done using previous year's planners. I attempted with the assistance of the Cluster Educator to introduce a new planning template incorporating a more 'thinking curriculum,' however this was viewed as too radical to the rest of the team. This was the reason I took on the weekly approach with small steps (Informal Questionnaire 2, August 2004).

The fact that little trialing of the new Chris' practice was evident in the data, further highlighted Principal Jones' contention of the need to bring about change, and that

even though we would like to think all staff have encompassed a shift to teaching and learning approaches, and pedagogy, we know that not all have' (Informal Questionnaire 2, August 2004).

It was clear that Chris had very little support from peers within this group, this research suggests that had Chris been able to form another support with one other classroom at this school, could have helped support Chris through this isolating and difficult time. Principal Jones also commented on these charter elements, agreeing that

Teachers need to raise the bar and have high expectations, instead of saying these students are not capable of learning, and dumbing down the curriculum.

Principal Jones further explained that:

...teachers needed to cater more specifically for individual needs of students at risk, [by] focus on teaching and learning and purposeful teaching. Boys are and still are at risk and our curriculum needs to cater for these boys. [And] our [statewide testing] results need to be raised, more preparation of students for [statewide testing] (Informal Questionnaire 1, June 2004).

Clearly, Chris valued her pedagogy practiced in this classroom, and was conscientious about the students' development, even when Chris had not taught the students for all subjects. At Farwest PS, there was streaming of maths classes for Year 5/6 students, based on test results at beginning of year. Students were streamed across the Year 5/6 teachers into ability groups. Chris explained,

I actually only have my grade for mathematics, twice, sometimes three times a week

because they are streamed at this school. And I just found there are a lot of portable outcomes, and outcomes that I didn't think were being covered in the other classes.

And the bottom line is I am responsible for this class of children, so I actually had to do a bit of catching up on a few of the units (Commentary 8, L3-7S7, 8TC).

One of the ways the 5/6 unit attempted to meet students' individual needs in maths was by streaming students across the classes into ability groups. This practice became another problem to be solved by Chris, as Chris explained that she felt responsible for the students lack of maths competency after they attended these streamed classes, and so took steps to improve the learning of the students despite the current inflexibility of the curriculum and timetable. The outcomes of student learning were described as portable, meaning that depth of learning due to movement around the classes, and perhaps the quality of depth of learning or the values on learning held by all members of the 5/6 team was not consistent and perhaps affected the learning of the students by:

- possible behaviour issues when students return from classrooms that were pedagogically poles apart; and
- inconsistent skill and expectation development between the 5/6 teachers (including Chris) which all affected student motivation, esteem and value in themselves as learners.

Despite the planning and practice issues within the 5/6 team, Chris' motivation to persist was reflected in the realisation that the cultural barriers of the students were beginning to break down through a behavioural shift in the classroom:

...it was really good for me because: yes they did struggle and they had difficulty drawing the angles, but I had almost half the grade that were able to still sit and apply themselves for the whole session to give it a good go. And yes they mucked up, and to move from running around finding a rubber to rub out their angles, to just putting a line

through it and having a go at the next one (Commentary 8, L31-35S7, 8TC).

Chris was supported by the students' motivation to take risks, despite the apparent lack of motivational support from some of the other staff.

Parents of the students at Farwest PS were identified as the final influential factor on the development of their children's learning in many ways. Farwest PS's charter recognised the role of the parent community:

Parent involvement and participation is actively encouraged. A key element of the school's operation is the sense of shared partnership and the high level of parent support and satisfaction with our school. The school's commitment to consultation and responding to parent expectations is evident in the operations of the School Council, parent forums and the processes of decision-making (Farwest Primary School, 2002-2004).

Chris acknowledged that parents had some affect on the pedagogy used in this classroom right from the classroom environment itself, to the learning activities, to homework:

There were kids that came to school and said: Oh mum wants to know why words aren't spelled correct in the classroom on display. And the homework isn't corrected... the 'I' s dotted and the 't' s crossed and things like that...I probably only correct their homework fortnightly. Unless I'm going to do something with it, and I know the kids don't look at their work again, and unless there was a specific teaching purpose was for the corrections, then why am I going to dot the 'I's and cross the 't' s? It was interesting uhm, at the parent teacher interviews when someone questioned...a word that was spelled wrong that was up in the room. And I drew their attention to the activity

that was based on the correct spelling. Of course I do spelling, I'm a Primary School teacher. I do spelling activities and that sort of thing. But the concept of this lesson was to think and acquire information about learning rather than showing their best spelling and handwriting. And there is a time and a place for spelling and hand writing, and I usually incorporate them into activities, and there are times when I'm not going to get hung up on kids, whether I'm worried about their spelling and what it looks like (Commentary 5, L112-126S1, 2TC).

Principal Jones contended that

...a lot of the parent community do not have high expectations for their children. It is too hard for some parents to assist and support their child. However, there are also some parents who are very active in wanting the best education for their children, and keep staff on their toes in regard to their child's learning' (Informal Questionnaire 1, June 2004).

Unfortunately, as in the previous description by Chris, some parents did not have new knowledge about pedagogy, if any at all. They may have been largely basing their values on spelling and so forth, from how and what they had learned, and the school experiences that motivated them either positively or negatively when they had been students. When change like this was being introduced into a school, the entire community should have been made aware of the differences, so there was consistent awareness, resulting in reduced impact on the learning environment.

For example when Chris had sent home activities for homework based on BORIS thinking tools, parents in general were not supportive and clearly indicated a lack of value or acknowledgement of the curriculum as presented by the teacher:

The children [had to] draw comparisons between two totally unrelated things. And I got two notes from parents to say 'how is a car like a movie star- what's that got to do with anything?' They didn't understand the concept. And I'd say it's because of the way that they'd learned. It's culture, it's a big cultural difference- and it probably is a lot of TV. And half the preps I'd taught came from a higher professional setting, where their parents worked in a -with ever changing staff in companies and in job situations- they knew their children needed to have those skills. Here, where there are tradesmen, and that sort of class of people, that's this, is the only way you learn, that's what makes your bread and butter. So maybe that's the difference- the attitudes of what they're learning (Commentary 5, L190-209S1, 2TC).

Chris commented about the culture of parents, and determined that this culture impacted the relevance and value of learning. This research asks whether Chris' position was one taken of middle class values on a largely working class area, as it would be unfair to assume that all parents who lived in this township shared this generalization.

Parents' values affected outcomes of creative learning in maths, due to a conflict of education values and understandings:

I had a child from another grade in my maths group, in the second week of me being here. The parent called in and said 'Oh, don't be offended that my child, since having you, is finding maths too easy.' And I said 'Oh may I ask why?' because I introduced the concept of open ended questions, you know- many answers, many possibilities, we talk about the processes of what we use in the mathematic language. And it was open ended question and there was seriously, an infinite amount of answers, the child completed one answer, and gave it to me- I said that's great, there are a million answers,

can you work at it and try and come up with more possibilities? The child couldn't cope. He mucked up...he, started swinging on his chair, throwing pencils, that sort of thing. He was used to a definite start and definite finish and they want to see results- a tick, I'll get a worksheet, which has a definite result for every answer, and I'm going to take three minutes on the page, because that means I'm a good boy. I've done my work, and my parents are happy because I didn't cause issues and didn't question what I was doing. And that's why, and you think to yourself, oh okay three minutes per question, so I'll have to have 20 questions for that session. So I showed this parent what the question was, and she said 'Well that's very frustrating, because you could have any answer.' So that's another Hello! it's another battle. A big battle (Commentary 5, L168-190S1, 2TC).

In summary, the school culture had affected the teacher's attempts to innovate classroom practice. Chris questioned the values and judgements of the pedagogic practice applied in this school, which resulted from the constraints of some elements of the domain. Principal Jones acknowledged that the Year 5/6 team's attitude to this was:

We've done it this way, so we'll do it that way again' confirming that 'most staff in Year 5/6 at the time were set in their ways, and just wanted to keep things rolling along...[they] resented change, especially from [Chris] an Innovations and Excellence co-coordinator (Informal Questionnaire 1).

The changes that took place in the classroom took around two terms. If the link between the paradigm of flexibility, time and creativity (as discussed in Case 5, Appendix 5, p. 255) for the students, who were in Year 5/6; then it would have taken longer for teachers who were restricted by accumulated knowledge, schemas and personal degrees of self-autonomy and esteem to be open to

change and novelty. According to Day (1997), this change:

would involve the school moving outwards to its community in order to create an interactive, collaborative culture, counteracting the hierarchical relationships of the traditional order, and parental reserve and caution at challenging teachers' professionalism. In this way, those same elements of ownership control and relevance characteristic of creative teaching and learning make the community an innovative educational force (1997, p. 82).

Farwest PS needed to be aware of the differences of perceptions of best practice before introducing change, to reduce the conflict that had impacted student learning outcomes and teaching practice, and in particular, the possible application of creative learning. Although the community's involvement in this research was not a focus, there was little, if no evidence to indicate through commentaries by Chris or Principal Jones, that parents were a positive and innovative force. Although parent involvement and participation was actively encouraged through the School Council, parent forums and the processes of decision-making (Farwest Primary School 2002-2004), it seems that a small proportion of that community are involved in policy decisions that determine resources and educational experiences available for learners. It can be generalised that the lack of parent support for their students and finding it too hard can be due to their own experiences of school, achievements, lack of skills such as those described by creative pedagogies. These experiences and attributes or lack thereof, contribute to the cultural and knowledge heritages and power relationships, which impact the ability of teachers and policies wanting to change the pedagogic practice, as many of the parents do not possess, value or acknowledge the relevant issues of learning and futures learning immobilising progress.

When asked how these measures or strategies were reflective of how teachers were expected to

increase their expectations of student outcomes, and what these measures were, the principal commented

Common planning days to plan curriculum each term, Moderation for consistency of teacher assessment, Introduction of [new statewide curriculum], More curriculum focus in planning weekly, specifically catering for individual learning needs (Informal Questionnaire 1, June 2004).

There is a focus on the product of learning in this priority, as well as most other learning priorities, and Principal Jones indicated that to cater to individual learning and the improvement of social contexts, would be through

Individual learning plans to cater for both academic and social and emotional needs of students; Not only in the academic areas but organised social skills programs and lunch time activities; and School values—respect, responsibility, honesty, fairness, kindness and co-operation (Informal Questionnaire 1, June 2004).

It is questionable as to how successful teachers are expected to increase their expectations of student outcomes, particularly when teachers' measures on how to develop curriculum that achieves student performance is clearly a focus on product, and not on practices outlined in creative or authentic pedagogies. How can curriculum cater to individual learning for improved statewide testing and curriculum assessment results, if the resulted expectations are standardized? Are teachers' expectations only raised by achieving better academic results, considering at risk students have complex issues which for many students themselves are not often prioritised by their academic achievement or success on tests.

Throughout the cases so far, there has been consistent reflection and comments by students on their value of interest, enjoyment, and ease of learning in a secure and safe learning environment via many of the more authentic pedagogies practiced by Chris. The achievements Farwest PS prioritise to achieve, along with the evidence about staff performance from Principal Jones' commentaries are, in practice, not meeting the desired outcomes consistently. It is clearly difficult for Chris to implement innovation to improve engagement and academic results. The perceptions of learning across the school culture are contrastively different, largely resulting from the lack of collaborative support and inclusivity of the learner in these contexts. The underlying notion in this case is a focus on management and heritages of knowledge, of parents, staff and students, related to product and behaviours rather than pedagogy which would improve outcomes and the establishment of innovative practices including creativity.

## APPENDIX 8

### **CASE 8: How does the relationship between the active participation of students and their perceptions of thinking, affect authentic learning outcomes which are also supportive of creative pedagogies?**

This case explores the connections of how students perceive the process and products of learning in contrast to Chris' pedagogic practice and Farwest PS's charter priorities. The data showed that the participants' perceptions of the learning which occurred, and the relationship which developed in Chris' classroom, had an impact on learning and thinking outcomes. The success of these relationships reveals the extent to which a classroom, like Chris', could support creative learning outcomes.

The first significant finding about the relationship between Chris' perceptions of student learning resulted in stimulation for learning, but not the type of learning outcomes expected. Chris' following reflection described a maths activity involving angles based on problem solving:

[Starting with] an opening question, where you really put the activity and onus of the response back on the children where they worked unassisted for a little while, had a good go at it, and then came to me. I found that this activity (I actually let them do it in partners) had required them to read the question and to uhm, to draw a shape, based on the criteria and what type of the angles the shape may have and what might it look like. Uhm applying the knowledge of what they had by just typical workbook activities of classifying shapes and naming angles, and sorry naming angles, told me then that in a real life situations they were not able to transfer that knowledge that I believed I had taught them. I had taught it but they hadn't learnt it. And to do this sort of question,

and for these children to really struggle to be able to draw their shape, tells me that they didn't completely learn it. And uhm I hadn't completely finished the unit on angles yet, but I had to take a complete turnaround. So it's actually a bit of reflective practice for me as a teacher to say, that yes these open questions are fantastic to be able to pitch at children who are really capable and children that are not so capable because the shape could be as sophisticated as well as the child could make, but I probably needed to have them transfer the knowledge about angles, a little bit in a more simplistic form than do something more sophisticated (Commentary 8, L13-29S7, 8TC).

Here, Chris reflected that the quality and quantity of knowledge regarding what was perceived for the students to have 'learned', was not shown during the process of the activity. Chris' commentary revealed that the innovative approaches to learning had not been applied by the students to their maths work. The significant element here is that Chris had made this realisation during the learning process and not at the end of the students' learning product for final assessment. Due to Chris' reflective practices, this meant that Chris' approaches could be altered to meet the changing needs of student learning to improve their outcomes. In this example, Chris personally demonstrated the ability to revert back to a beginner status and try again, and re-evaluate the processes for learning again, to achieve the desired outcomes of active student participation. This practice was significant to this research, as it showed the potential for creativity to be supported by Chris, as identified by the characteristics of flexibility, *elegance of problem solving*, and *risk taking* elements of creativity in Table 1 (pp. 37 – 38). Chris further explained:

[This] is something that is still really important to me, it's that process of getting in, having a go and it doesn't matter that it's wrong, then go I learned from that, that angle is too big so that side is too long and the next shape. And for me to then see the mistakes in the shapes that they made show that they were successful, it showed that

learning and uhm, two girls in particular, two Year 6 girls, and they were very excited at the development of how they worked to get their shape and I think uhm initially when I stated the questions children want to get the answer the first time, they didn't have the answer, they couldn't do it. They cottoned on that it didn't matter that they don't have the answer the first time, the children learned from that first attempt (Commentary 8, L37-457, 8TC).

To eventually get so it's back to that uhm, me stressing to the children and I think they are cottoning on, now, that I don't want just the answer right, I want to see how it developed, and how you got that particular answer. Mind you I would've thought that they got the answer much quicker, and they didn't, but that's just the way it worked (Commentary 8, L47-50S7, 8TC).

From this data, Chris clearly showed her value on the active participation of the students' learning rather than the product alone. This was made clear to the students and in turn motivated them to try again. In this example, this process of participation resulted in the students being 'excited' about their learning, which was a successful outcome for both Chris and the students. However, the problem here for Chris, was trying to fit new pedagogy and meet expected outcomes within a restricted timetable and curriculum. This left little room to develop assessment measures of her new pedagogy that would show these positive and productive developments, such as in the previous girls' commentaries. Later Chris commented on another example where students had begun to apply the thinking skills taught to other areas of learning:

Researcher: And you found they started to realise that themselves?

Chris: Absolutely, they would have cottoned on. And then to get a child on Monday morning proposing that they do a recount of a weekend, for a child to come up to you

and ask if they can represent their recount using a Lotus diagram, Venn diagram, concept map, whatever...is exactly what I wanted to achieve (Commentary 6, L85-89S3, 4TC).

In contrast (not a word), some students commented about their thinking skills:

Researcher: Yep, is this something you knew how to do before this, are these thinking strategies ways that you knew how to do before? Or is this something you've learned with [Chris]?

Jamie, Robyn, Morgan: With [Chris].

Researcher: Okay is this something you can apply to only classwork, or do you find that you do it outside the classroom or?

Robyn: Yeah, Sometimes outside the classroom.

Researcher: Yeah?

Jamie: Not really, I don't use it outside the classroom (Commentary 1, L33-43S1, 2SC1).

While there was a disparity of perceived applications of learning in comparing the two commentaries between Chris and the students, it was generalisable that, in light of the cases so far, the new approaches to pedagogy had successfully stimulated learning and engagement. While this environment and the relationship between Chris and the students could stimulate the engagement for learning, it also suggests that this could support creativity, but in small steps.

Chris tried to cater to individual learning styles with her innovative practices and thinking skills program. The relationship between student engagement which this commentary has shown, and Chris' perceptions of learning, indicated that improved authenticity had been achieved for this

student: more than the teaching program had done previously.

Oh okay yep this is when uhm, this child didn't actually know where to begin. He, this child is very artistic. He has a lot of problems with written language. And hear what I was saying before, with having problems with the tangible (pause) intangible aspect of feeling something. He also has a very difficult time socially and emotionally, this child, with expressing anything; and I think this represents it. So uhm as you see, and I've got this final product, when he's able to express himself and put himself into another person's situation. Well, if I'm not me, and I'm someone else, how do I feel about being involved in this activity? Feels less threatening, and he was able to overcome it, but he still had an issue against that hill...once he got started he saw, he was actually quite uhm, immature, egocentric responses to what he saw, he's that type of child, that wrote I saw balls, I saw children, I saw teachers, I saw concrete- you know exactly what he saw, he was able to further extend himself (Commentary 7, L91-102S5, 6TC).

Researcher: Is he a student who would recognize these activities as being creative?

Comparing it to artistic things, you know, things that he enjoys doing as an arty kid these are your words.. not the teachers...? Has he ever verbalized that to you?

Chris: Uhm he hasn't, however he, (sigh), but if you want to talk about quantity, he certainly has done a lot more work under those conditions rather than straight out of bookwork, worksheets or what not. He would find it difficult to get through the work, but, I've got more as far as quantity is concerned.

Researcher: Does he recognize that aptitude towards the work? Or he doesn't make that connection?

Chris: I don't know. I'm not actually sure if he does. But for me, for him then to get so

engaged in that activity the next time, tells me he has made the connection because if I didn't produce it, it might be a Lotus diagram, or some type of you know, map- he's very good at maps, or mazes and puzzles and things like that, if I gave him an alternative he would be slow off the mark. If he's able to articulate it I'm not sure, yet because he's getting into it straight away, and producing the work, it tells me that he is (Commentary 7, L91-118S5, 6TC).

This student was described as artistic and it seemed that the types of activities used by Chris had engaged him to produce more work than before, as it had relevance and interest for this student's way of thinking and the importance to students of keeping things relevant, making learning more authentic. This notion was further explored by students Morgan, Casey, Robyn, Lee and Billy who described their perception of more creative types of learning in relation to active participation and engagement:

Researcher: Can you tell me a bit more about not being able to do creative stuff that you think is creative? Do you think it would be good to do creative stuff every day, all the time?

Morgan: Not all the time, but like.

Lee: Like every single week (Morgan and Lee are talking over each other )

Casey: Occasionally.

Lee: Like one a week.

Robyn: Mmm (agreeably).

Lee: You could break it up over the day.

Morgan: Yeah like before recess and after recess and then it won't get boring.

Lee: Or before recess, then a sheet, then another creative and then a sheet again and then (Commentary 3, L177-186S5, 6SC2).

The final example shows how Chris' perceived thinking could affect learning outcomes for a possible creativity focused learning environment. This comment by Chris recounted a maths activity where the students had played a game of bouncing a ball from person to person to stimulate thinking. Chris described:

I just expected them to say 'Oh children...Balls', that sort of thing, but we went a little bit further than that. We saw descriptive things, like 'we saw children having fun', so, that's a little more of the type of thinking, the deeper thinking than just saying what they...they interpreted what they saw I suppose is what I'm trying to say (Commentary 7, L74-78S5, 6TC).

Chris described the students' comments as deeper thinking, however the description 'we saw children having fun' did not explore higher order thinking as defined by Scholl, Nichols and Burgh (2009), Wilks and Cherednichenko (1997) and Splitter (1995), nor sought to explain why or what caused the fun. Another indication that creativity was less likely to be successfully supported from this type of activity is due to the results of the ball game being re interpreted onto a Y-chart rather than the processes involved during the ball game being used as a measurable outcome. A method of Community of Inquiry (Barrow, 2010; Splitter, 1995), techniques and an evaluation of the discourses could have been used to develop discourses with these middle years students, rather than are interpretation of the discussion on a worksheet, (despite the worksheet being based on thinking tools). The worksheet in this case had become an assessable product, but not necessarily of the process of thinking; clearly this type of activity would constrain creative pedagogies. From this realisation, it further exemplifies Chris' struggles in implementing her innovative practices for school based accountability.

Overall it seemed that student's learning outcomes were largely affected by the teacher's perception of learning and student understanding of the new learning techniques and their applications which attempted to be innovative and build creativity. The data revealed that the activities in this classroom stimulated learning, and to varying degrees could be supportive of a creative learning environment. A significant finding was that because of a lack of student engagement, Chris needed to think more creatively about the next approaches used in the classroom. While it was evident that the students were engaged in learning processes, it was difficult for Chris to have academic assessment. Despite her values on the importance and relevance of assessment measures during the processes of learning, it proved a difficult task to implement. This was due to timetable restrictions and little support from the teaching staff, and the fact that the school's pedagogy was founded on accountability and standards based curriculum. A learning environment that was more flexible with time and process focused would be more able to sustain authentic creative pedagogies, and arguably more of Chris' innovative teaching.