

**Science and Mathematics Education Centre**

**The Classification and Framing of the Curriculum: A Case of  
Integrated Studies**

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## **Declaration**

This thesis contains no material, which has been accepted for the award of any other degree or diploma in any university.

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

Signature: .....

Date: .....

## **Abstract**

This study focuses on curriculum integration for several reasons. Firstly, because there appeared to be no clear definition of integration nor a consensus on what constituted good integration. Secondly, there were few studies on integration and the type of learning involved. I believe that a study looking at an integrated unit in depth should help to shed light on what integration is and how it can be accommodated within the school system. Thirdly, an opportunity existed to observe such a unit within an established middle school. As integration is purported as being “the way” young adolescents should be taught, a middle school setting seemed ideal to me. I thought that this setting should be far enough removed from the content driven senior school to allow for its complete and uninhibited development, especially given the philosophy of this well developed middle school. Fourthly, I am interested in the potential of integration as a way of focusing on learning outcomes rather than curriculum inputs.

My own theoretical perspective, with a heavy leaning toward constructivist ideas, caused me to lean towards qualitative rather than quantitative research methodologies and methods. I wanted to do justice to the study by clearly describing the social context of the school and the curriculum. Basil Bernstein’s pedagogic code was seen as a way of providing the framework for the development of such a method of description. As this pedagogic code had seldom been used in a study such as this, a complete investigation of its descriptive and analytic power was seen as being of benefit to future curriculum research.

The study involved two major tasks. The first task was to develop the framework to a point that it would provide a descriptive language for the recording and analysis of a school culture. This was done by reconceptualising theories about the sociology of knowledge drawing on research by Bernstein (1971a; 1971b; 1977; 1990; 1996; 2000), Young (1971), Daniels (1987; 1989; 1995; 2001), Morais (1992) and Parker (1994) and modifying the resulting mapping tool developed to suit the complexity of the data gathered. The second task was to apply this framework to the observational data and to derive a description of the culture of the school and the micro-cultures of the two units of study observed within this school. From this description meaning

was generated in the form of propositional statements about the development of an integrated unit of study within the culture of a school.

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## Chapter One: Introduction

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### Introduction

This chapter is intended to orient the reader to the structure of the thesis. I describe the initial stages of the research, my own beliefs and understandings and my early forays into the literature surrounding the topics of knowledge, status, change, integration, middle schooling and the grammar of schooling. The most important theoretical meter for my work is Basil Bernstein's pedagogic code (1971b).

Stumbling on to this code early in my thesis journey was a bonus although it proved very difficult and time consuming to develop a working knowledge of the ideas behind it. I had to become familiar with the terminology of the code before it could be developed as a framework for the study. Over time, the code provided the guide to the research, enabling me to examine aspects of the social and cultural nuances of one school and its curriculum practices.

In addition, writing a thesis in this time and age requires a good familiarity with information processing skills and this had to be developed as I progressed with data collection, transcribing and analysis and came to grips with the concept of templates, styles, master documents and the use of supporting software such as EndNote (ISI ResearchSoft, 1988-2002) and Nvivo (QSR International, 1988-2002). None of this is assessed in terms of the thesis but it has proved a valuable learning experience that will stay with me for many years to come.

Also in this chapter are the outlines of each of the chapters and a summary of the methods and methodologies, including an example of my early attempts of writing and analysis.

## **The Journey's Beginning**

I decided to use the metaphor of a journey to depict my progress through the study. The journey metaphor allowed a personal writing style that helped me through those times of writers' block and proved a valuable way of getting to know myself and what it was that I was learning. I found myself resorting to this style of writing to help develop my ideas about the framework of the study. I have used this style of writing in this chapter to outline my own background, explore some of the background literature and outline the structure of the thesis.

### ***Background***

This chapter and the last chapter have probably been the two most difficult chapters to write. So many times I have sat at the computer and haven't known where to begin, very much like at the beginning of this thesis when I was floundering around trying to get a handle on what it was I was trying to do. The path I have taken has been fraught with frustrations and difficulties and I have often been tempted to give up, but the journey has led to a deeper understanding of the research process and an appreciation of an enquiring mind to see around corners when the path ahead appeared to be blocked. Now that the journey is over, I can't help but feel that it has heralded a new beginning and I look forward to the future with optimism.

When I came to the Science and Mathematics Education Centre (SMEC) to commence a PhD my intent was to pursue something that I had started over twenty years ago. I had completed an Honours Degree majoring in Genetics and a Postgraduate Diploma in Education and had taught for one year when I fell in love and decided to get married. This meant abandoning my plans to teach in order to follow my husband overseas and assist him with his plans for furthering his career. In between travelling and raising three girls I have managed to teach for a few years, never very long at any one time, and have developed a keen interest in what goes on in schools and how children learn, with my own children as the subjects of my interest.

As I worked through a course I took in preparation for my PhD, my understanding of 'curriculum' and its importance changed. In its ideal form I could envisage a school where subjects no longer existed and students worked in collaboration with the teacher to follow their interests and develop sound reasoning and communication

skills using a wide variety of disciplines. The teacher became one of the students and was there to help motivate and guide students but mostly to exemplify the voyage of discovery the students were embarking on. Realistically, and much to my disappointment, I never expected to see this form of integration in action. The course revealed to me just how set in our ways we can become and that, even when the restrictions on schools are lifted and we are encouraged to explore new curriculum ideas, we tend to return to the method we grew up with and revert to a metaphor of curriculum ‘as subject or content matter’. The question ‘isn’t there a better way?’ persisted and I was left wondering what could be done. I wanted to investigate how culture determines the way we view knowledge and influences what is and is not considered important. I began to read widely through the literature on culture and the dissemination of knowledge.

### ***Knowledge and Status***

Knowledge appears to be built around a common culture (Blum, 1971). The current discipline-based school curriculum has existed throughout the twentieth century and into the twenty-first century, with variations to accommodate different sectors of society. In general, three main curricula exist (Goodson, 1983): the academic, the utilitarian and the pedagogical. The academic curriculum is intended for those belonging to the middle and upper classes, whom it is assumed will pursue a profession and not aspire to manual or vocational work that is seen to be beneath their social status. The utilitarian curriculum is intended for those of lower socio-economic status who will end up in a manual job. The pedagogical curriculum is reserved for those students generally considered academically unable and is designed around how a child learns emphasising the well-rounded individual. This final curriculum, the pedagogical, comes closest to the philosophy recommended for educating young adolescents (Beane, 1993, 1998b; Hargreaves, Earl, & Ryan, 1996) although it is often perceived to consist of what Young (1971) calls low-status knowledge. This third type of curriculum fitted well with my own idea of what curriculum should be.

Goodson maintains that, subjects, once accepted, need to appeal to the pedagogic and utilitarian aspects in order to survive but “given the link between knowledge and status and resources, subjects can best promote themselves through the academic

tradition” (p. 201). He sees the academic curriculum as producing, “industrial illiteracy for its successful minority and pervasive disenchantment for the majority” (p. 204). I felt that I had perhaps been naïve in thinking that education was a right of all and was influenced by my own middle class upbringing so as to be unable to visualise the difficulties that other social groupings face when confronted with middle class educational curricula. These readings were beginning to open a door for me into the intricacies of politics and education. Lewis and Forman (2002) argue that the social class and the school culture interact to impact on what teachers and parents can accomplish. Participants are functioning in a system where the curriculum of the latter years of secondary education bow to cultural, political and economic demands by providing high-status, discipline-based knowledge structures that do not take into consideration cultural, social and individual demands (Fensham, 1988). As a note, all three of my girls attended the school where I conducted my research. My own daughters’ education involved a gradual progression in the secondary years from a hands-on, student centred curriculum designed to provide a well rounded education to a more rigid, academic approach in the latter years of their secondary education aimed towards the final Year 12 external examinations. My eldest entered the school when the middle school component was in its infancy. My second daughter followed two years later and now, six years later, my youngest has entered the middle school. Over these years, I have witnessed considerable change in the structure and the curriculum of the middle school with an increased emphasis on pastoral care and the needs of the adolescent.

Giroux (1990) calls for the empowerment of youth within our schools to encourage young people to become citizens capable of “exercising power over their own lives” and “over the conditions of knowledge production and acquisition” (p. 49). Providing for such a curriculum as expounded by Beane (1993; 1998a) and others, although appearing more equitable for students, calls for significant changes in society’s perceptions. Inroads into teacher education would need to be made in order to help teachers cope with this change in philosophical mindset (Mason, 1996). Although teachers may agree in principle with these sentiments it has been noted that many lack the knowledge of how to do this and are reluctant to empower their charges, while experiencing what they perceive as, their own declining empowerment. Reading through the literature I began to develop an appreciation of the challenges of

curriculum change while continuing to look for ways to improve the conditions of schooling for young adolescents.

### ***Evidence of Change***

Change is a complex and difficult journey that takes time and resolve and occurs in stages (Fullan, 1993). Having moved through this part of my own educational journey I am now in a better position to understand just what is meant by this statement. It is necessary to see the evidence of change as it subtly impacts on the curriculum and not lose heart. I believe some evidence of change can be witnessed in the recent modifications to the West Australian curriculum. Many of the ideals of the new curriculum set out by the Curriculum Council of Western Australia (1998), such as, a unified approach, a focus on outcomes, overarching outcomes that span across all areas of learning, the ideals of allowing students greater responsibility for their own learning and greater input into what they want to learn, are congruent with the ideals of middle schooling. While the new Western Australian curriculum is still organised around eight key learning areas, integration is one of the seven underpinning curriculum principles.

I decided to further investigate what was meant by the terminology of integration in relation to different levels of schooling and was surprised by the lack of consensus and the conflicting ideas of what constituted good integrative practices.

### ***Integration***

Initially I thought I would investigate integration as "research examining integration in practice is still relatively rare and teachers and researchers do not know the answers to questions about the advantages and disadvantages of integrated teaching practice and the consequences in terms of student learning" (Wallace, Rennie, Malone, & Venville, 2001, p. 9), but how to do this? The topic was very broad and poorly defined and I toyed with the idea of looking at the transferability of skills and knowledge and motivational aspects of integrated teaching and learning, as suggested in Wallace et al (2001, p. 14). My own experience indicated that teachers in the classrooms do not have the time to reflect on their teaching even if at some stage they find themselves wondering about ways in which to improve the learning of their students. It seemed unlikely that they would often question what they were teaching

their students or why they were teaching certain things. Most teachers I know would agree that students need to be motivated and encouraged to develop a thirst for knowledge and to take on responsibility for their own learning. They would also agree that students learn best when what they are learning is relevant to their own lives and when they have some input into constructing their own learning process. Most would probably see integration as a 'good' thing in the abstract. However, they would likely have different views of what integration is, how to implement it, and how to assess its effectiveness. I suggest that they would largely agree that integration takes a lot of time on the part of the teacher.

Studying the literature I began to realise that most attempts at integration within the school structure were in the nature of what I would have termed 'projects' about some general theme such as 'French Week' or a more specific technology based project such as building a solar powered vehicle (Venville, Wallace, Rennie, & Malone, 2000). Sometimes one teacher who taught both mathematics and science to the same class would choose to teach topics such as volume at the same time in each subject area. This strategy may allow a greater period of time for the students to investigate one topic in depth. Other kinds of integration include cross-curricular approaches, competitions, school specialist approaches, topic integration, integrated assignments, synchronised content and processes, local community projects, teaching approaches and natural/informal integration (Venville, Wallace, Rennie, & Malone, 1998).

According to Beane (1993; 1996) integration should ideally start with the interests of the students so the students can scaffold their own learning. Beane suggests the dissolving of subject boundaries and willingness on the part of teachers to engage and negotiate with the students in order for students to be able to scaffold their own learning. Czerniak (1999) accepts that this approach appears to make sense but also warns that few studies report integration as being any better than a well-designed traditional approach to the curriculum. George (1996) is critical of an integrated curriculum because research doesn't really support the notion that it does anything better than a subjects' based approach. Moreover, many teachers do not know how to collaborate to produce integrated curricula (Mason, 1996), which may well be a major problem in implementing integrated curricula. Standardised tests also tend to assess discipline-based knowledge rather than those skills and knowledge attained

through an integrated curriculum, hence trivialising the learning and teaching potential of an integrated curriculum. Jacobs (1989) and Gardner (1994) note that integration requires certain pre-requisite knowledge and that this, coupled with the structure of the school day, may limit the time available to plan and implement an integrated curriculum.

Fogarty (1991) proposed various models of integration that assumed a position on a continuum ranging from minor forms of integration within a subject, through forms that utilise common themes across disciplines to a holistic form of integration that stems from the learner pursuing his/her passions and does not involve traditional subject disciplines. Hargreaves, Earl and Ryan (1996), in their discussion of integration had this to say about differing forms of integration.

The continuum is a popular device for representing variations in educational practice. It allows finer discriminations to be made than straight polar opposites allow. .... A continuum of curriculum integration holds out the promise of charting and pushing progress towards ever more sophisticated interpretations and implementations of integration. ... it is conceivable that an integrated approach to curriculum can have content filtered through students' interests, while students choose that content in subject specialist ways!! ... One single continuum of curriculum integration does not allow these differences to be captured at any single point (p. 103).

Hargreaves et al. (1996) understand Case's (1991) interpretation of curriculum integration as being closer to describing the complexities and multi-layers of integration than a simple continuum allows. Case describes integration in terms of five different parameters. Drake (1998) suggests that "most experts believe that integration occurs along a continuum where progressively more and more connections are made" p.18. While she herself holds that integration can be seen as a continuum, which progresses through Multidisciplinary, Interdisciplinary and Transdisciplinary stages involving less definition of subject boundaries, she says that it is clear to her that no one form of integration is superior to another "rather, different approaches are more appropriate than others according to the context in which they are used" (p. 18). Many teachers and researchers would probably tend to agree but where does that leave the teacher who is faced with the challenge of

integration? There is a myriad of different models but little guidance as to which would be the best model to try in a given circumstance. The presentation of the models as different stages along a continuum tends to impart the message that as one progresses along the continuum one is improving the implementation of the integration and therefore the closer one is to the integration end of the continuum the better one is at it. The opposite may well be true because the style of integration may be at odds with the culture of the school. Integration in most school-based situations is not contemplated as an alternative to discipline-based subject areas but is usually adapted to work within a traditional school culture. There does seem to be some support though for integration in the lower secondary years, which is becoming more concerned with philosophies calling for a greater emphasis on the needs of the adolescent. Some schools are now incorporating a middle school to cater for adolescent students.

### ***Middle Schooling: The Home of Integration?***

My growing interest in integrated curriculum led to my decision to observe an integrated unit of study at a local K-12 girls' school within an established middle school. Beane (1991) suggests that "middle school is the natural home of [the] integrated curriculum." Roberts (1998) suggests that, "redistributing the 'curriculum pie' in the middle years is not about bigger or smaller pieces or who gets served first, but how to serve the pieces in less fragmented, more wholesome and therefore more satisfying portions" (p. 75). Building on the work of Beane (1993; 1996; 1998a; 1998b), Drake (1993; 1998), Gardner (1994), George (1996) and Roberts (1998), Fleming (1993) proposes a curriculum model where by the teaching of prerequisite skills is followed by interdisciplinary blocks of work where teachers collaborate in teams specifically to cater for the needs of middle school students.

As I read through the literature I came to realise that attempts to define and create boundaries can cause difficulties and that integration, although definable in a broad sense, is a broad topic with many different forms. There appears to be no single way of integrating.

Educators such as Beane (1991; 1993; 1996; 1998a; 1998b) and Lounsbury (1996a; 1996b; 2000) argue that integration requires a fundamental shift in not only the resources of schools but in people's conception of the reason for schooling.

Perceived failures are due to inadequacies in resourcing or the inability of educators to accommodate a change in their philosophy thereby reassessing what it is they are hoping students learn. Many of the philosophies behind integration have been incorporated into the Curriculum Council of Western Australia's guidelines for outcomes-based education, known as the Curriculum Framework (Curriculum Council, 1998). This framework has an outcomes focus and attempts to provide a uniform curriculum across all Western Australian schools. Although the framework describes eight key learning areas, integration of knowledge is encouraged through statements such as:

Our society is characterised by rapid technological development, increasing cultural diversity and changing family and institutional structures. Changes in the nature of work, the growing interdependence of world communities, global environmental issues and social, political and economic conditions will continue to pose challenges and offer opportunities throughout the twenty-first century. (Curriculum Council, 1998, p. 13)

### ***The Grammar of Schooling***

I became aware that because integration was part of the curriculum of a school, the social context was very important. According to Tyack and Tobin (1994) the 'grammar of schooling' refers to "the regular structures and rules that organize the work of instruction, for example, standardized organizational practices in dividing time and space, classifying students and allocating them to classrooms, and splintering knowledge into 'subjects' " (p. 454). From this definition it can be seen that the 'grammar' can be defined in many ways and between different members of the school population including the principal, school council, department heads, teachers, students and parents. It is possible to consider part of the 'grammar' of a school by focusing on one of these aspects but to get a comprehensive view of the true nature of the overall 'grammar' of a school it would be necessary to investigate as many combinations of relationships as possible. While reading about the sociology of integration I noticed that several scholars (Daniels, 1995; Young, 1971) referred to the importance of Bernstein's pedagogic framework and its power in describing the cultural dimension of a school with the curriculum. I decided to investigate this in greater detail to see if I could use it as a framework for my studies.

## *Bernstein's Pedagogic Code*

This pedagogic framework was the life's work of Basil Bernstein (1971a; 1971b; 1977; 1990; 1996; 2000). The reading provided some very distressing moments as I grappled with the sometimes almost incomprehensible text, but the more I read, the more convinced I became, that here was a possible tool that I could use in my research. This tool was based on Vygotskian elements and considered a wide view of teaching, incorporating the importance of the social context within the curriculum. Bernstein's (1971b) use of the word "integration" arose during his development of a model of pedagogic knowledge. This model was used to show formally "how dominant power and control relations are realised as forms of pedagogic communications." In order for Bernstein to explain his theory he felt it was necessary to "develop a special language" (Bernstein, 2000, p. 5) because of the difficulty of making oneself fully understood when one is committed to putting ideas in print form.

Bernstein understood that the pedagogic practices of the transmitter of the rules of grammar that define our culture were influenced by and in turn influenced the social/cultural base of the society involved. In Bernstein's words, "Pedagogic practice [can be regarded as] a fundamental social context through which cultural reproduction-production takes place" (Bernstein, 1996, p. 17). This cultural reproduction/production could be intentional or unintentional and the curriculum may be seen as having a hidden agenda, as described by Portelli (1993). Alternatively the curriculum could be seen as providing an agenda for cultural reproduction as discussed in Schubert's work (1986). Hasan (1999, p. 15) has provided her own interpretation of Bernstein's pedagogic code in a schema that corresponds closely to my interpretation (see Chapter Two, Figure 3), which I feel can be of greatest benefit as a language of description useful within and about schools.

Bernstein, in his development of a theory of pedagogic knowledge, re-defined many terms to enable him to use them succinctly within his discussions of the relationships existing within a school. His theory is based on his understanding of the power and control that operate at different levels of analysis but are embedded within each other. This power and control are the factors that determine the 'grammar of

schooling'. His theory is an attempt to provide a logical structure and the terms necessary to speak about this grammar of schooling.

A framework that holds as important the written and unwritten rules of our culture that informs the grammar of a school and consequently has direct bearing on teachers' practises of instruction, in my opinion, would be of significant value in curriculum research.

## **The Development of the Framework**

Chapter two deals with the development of the framework to a stage that proved useful to my case study. I did not want to deal with quantitative methods involving sociolinguistics, which others had done when using this framework (Daniels, 1987; 1989; 1995; Morais et al., 1992), as I hoped to keep my study in the realm of teachers who might benefit from the study. I chose to develop the framework to enable it to provide a rich source of data considering elements of the observations that incorporated the social nuances between students and teachers and the grammar of the school.

When reading chapter two it is necessary to realise that I, like Bernstein, am trying to redefine terminology and make it part of the framework. Some terms may be closely associated with the reader's own ideas, others not so closely. It is not possible to retain old definitions of this terminology; they must be replaced by the meaning intended for the framework. It is also not possible to define them here as it has taken most of chapter two to do so.

The final mapping tool, developed in chapter two and modified in the final chapter, proved very useful in developing the propositional statements that can be found in the concluding chapter. The modifications to this mapping tool were necessary to accommodate the data revealed in the study. Although not directly attributable to any one person the mapping tool was developed from ideas of Bernstein (1971a; 1971b; 1977; 1990; 1996; 2000), Young (1971), Parker (1994) and myself, so that a visual representation of the data could be achieved enabling greater ease of manipulation.

## **Methods and Methodology**

Chapter three deals with the methodology and the resulting methods chosen to collect the data. This chapter proved one of the most difficult to write.

The difficulty was in being explicit about the epistemologies informing my theoretical perspective and how the methods related to this perspective. As my instincts were to keep the study as qualitative as possible I chose to do an embedded case study. In chapter three I describe the case study methodology backed by the epistemologies of social constructivism and constructionism.

I conducted my research in a large, private, girls' school. The school had a middle school, which was developed expressly for educating young adolescents with a strong emphasis on pastoral care and the students' needs.

I collected data through participant observations and semi-structured interviews as well as collecting various artefacts such as test papers, practical experimental write-ups and other written work of the students involved. I was in the school during the observation and interview period for most of five days per week and observed 51, fifty-minute lessons in total, for the duration of term four. Appendix A gives a synopsis of how much time was spent in the school.

The class under observation was a Year 7 group consisting of 26 eleven to twelve year-old students, all female, and their teacher who was also the Year 7 Level Coordinator. Seven students were later selected for interviewing and these students' parents were also interviewed. The interviews were semi-structured and the questions broadly based on the components of Bernstein's framework. The teacher observed was interviewed before and after the observation period and we had many informal discussions about what we observed about the students and the curriculum. The teacher appeared to appreciate the opportunity to discuss teaching strategies and I saw this as one way the participants could benefit directly from the research process. Three other Year 7 teachers were also interviewed. These teachers came together twice per six-day cycle to discuss the students and various aspects of the curriculum such as integration. Attending these meetings gave me different perspectives about the units and their impact on the students.

My own three children attended the school and I was familiar with many of the teachers. I had also done some relief teaching within the school at different times. My intimate knowledge of the school placed me in the position of being able to witness changes to school procedures over time and has provided an additional longitudinal aspect to the study.

## **The Case Studies**

Chapters Four, Six and Seven are descriptive chapters that serve the purpose of providing a picture of what I saw as the researcher. These chapters allow the reader to identify with the school and units taught. Chapter Four describes the culture of the school and Chapters Six and Seven describe the units observed.

In preparing to write these three chapters I utilised the act of writing in different voices, extensively. I used this technique to set the initial scene and to extend my ideas into the analysis phase of the research. What follows is an example of this writing, used here to initiate the reader into the context of the research.

### **Early Attempts at Analysis**

Many levels of analysis occurred throughout the development of the thesis and the following writing reflects an early stage in this process. Although describing what actually happened it also reflects my own thinking about the episodes at the time of collecting the data and at a later stage when reviewing the data. This type of writing proved most useful in developing a link between the data and Bernstein's framework and can be seen as an early phase of the analysis stage of the thesis.

The following narrative has a number of different fonts throughout. This has been done so that the reader can recognise the voice that is speaking. This font, *Comic Sans MS*, is used to speak "as a narrator of the field observation experience." This writing is mainly descriptive in nature.

This font, *Palatino Linotype*, is used to incorporate my own feelings as I write the narrative. These comments may well be different from the comments I would have made at the time of the observations and hence have arisen after familiarising myself with the context and data. I call this my reflective voice.

*This font, Times New Roman Italics, is used to indicate that the information given is a direct quote from transcriptions of interviews or from my field notes or other forms of artefacts collected at the time of*

*making the observations. **Bolding of words** in this font is used to draw attention to what has been said as I wish to comment further about it using my own reflective voice.*

### **The Students' First Encounter with the Integrated Unit**

The formal instruction commenced in the afternoon, instead of that morning, with all four classes of Year 7 students amassed in the Middle School Learning Centre and their teachers who would be assisting them in this integrated unit. It's amazing how much instruction is given in a classroom when the teacher will quite adamantly insist that the girls are responsible for their own sequencing, pacing and selection of work. In this particular Forensic Science Unit one entire lesson was devoted to giving the girls explicit instructions as to what needed to be done in order for the trial, which was the culmination of the unit, to proceed in two weeks time. The teacher had her laptop; all girls in Year 7 must own their own laptop, connected to the data projector and was projecting on the screen all of the folders and instructions that the girls needed to access as she explained the basic outline of the unit. The girls were not encouraged to take notes and in fact I did not notice any of them doing so. Most were paying fairly close attention but the instructions went on for such a long time that I am sure many of the girls ended up thinking about other things. I know the teachers did as they were sitting at the back of the centre with me and were often preoccupied as various comments from them indicated.

While the teacher in charge went through the necessary elements that needed to be completed she referred consistently to a website that had been created on the school intranet for the girls to access. This site had

the basic outline of what needed to be completed for everyone involved and actually consisted of several documents.

*... When I've finished talking to you and you disappear off into your classrooms. You're going to get out your laptops and you're going to go to the Q-drive, just like you normally do, go to the Year 7 Science and Maths Folder and you will find in there, in addition to all the other things that we've looked at over the course of the year, you will find. Oops, you will find a folder called the Forensic Science Integrated Unit, except that I haven't written it all out in full. And when you open up that you will see that there's a series of Word Documents. Now they are all hyperlinked together, so that you can look at them either independently like this, or you can just go to the first one and then they're all linked up. The story that you're going to be reading this afternoon is called, "Aunt Mimi and the Swami". .... You need to go to your instructions and that's the first hyperlink that's on here. Now what will happen is a pretty purple page and at the top of that you will discover that um it's called The Trial. And we are **going to actually prove that this person, Henry Posely** who you will discover things about as you go through this particular story, why he is **in fact guilty of fraud**. (Introduction to Forensics 16-10-01, transcript, paragraph 8 & 14)*

The teacher continued to give instructions in this fashion for the rest of the period, going through each of the documents and outlining everything that needed to be accomplished by the class, not necessarily each individual as they were going to be working in groups with different responsibilities towards the final outcome. Her intention was to inform all of the students, and possibly the other teachers, of exactly what was needed, so that each group could envisage where their piece of the puzzle would fit. This was difficult, as the groupings had not been decided yet.

I had not realised at the time of witnessing this just how much instruction had been given to the students in a small amount of time and had certainly not felt that it was out of place given that I was witnessing a, supposedly, integrated unit of work. Nor did I realise that the teacher had already told the girls the verdict of the trial even though this was something that they themselves would be manipulating as they grappled with evidence and writing the transcript for enactment. They were entitled to have a different outcome on the basis of the evidence that they actually contrived from the story. This teacher appears to me to be very much in control of the situation and not able to allow the girls the luxury of finding their own way. The guidance is not guidance but instruction. Using Bernstein's framework, this teacher has very strong control over the selection and pacing of the work without realising. Had the girls been left up to their own devices to completely structure the work for themselves, however, I doubt that many would have achieved anything much. It was obvious that in this environment the teacher had already noted the degree of control she needed to assume if the majority were going to come out of the two-week experience with something to show for it and she wasn't taking any chances.

**The instruction continued in a similar vein for the entire period.**

*... Now my suggestion is that as you go along, when you are reading the story, pick out important pieces of information and evidence as you go rather than trying to do it all later. ...The class is basically going to get divided into half. Half of you will become the jury for the trial at the end and the other half of you will be involved in setting up the script and various other things, which I will explain in a moment. So you'll need to decide, this afternoon, what role you're going to take. ...The jurors, your job, not only will you be given the task of getting yourself ready for the actual trial in terms of your character, but you will also need to put together the evidence... There's lots and lots of little things that you're going to need to actually put together for the people that are writing up*

*the trials. Now you need to prove a pile of things, and I've got them in yellow there, so you will need to prove all of those things. It doesn't make a lot of sense to you yet but once you've read the story it will. ... The trial itself, those people that become the crown prosecutor and the defence council and the judge and the judge's assistants have a very special job. Your job is going to be to take the script that we used last year and change it to suite the story for this year. (Introduction to Forensics 16-10-01, transcript, paragraph 14)*

The teacher spoke about the script from last year without realising that she needed to briefly say that a similar thing had been done last year with the previous Year 7s. One girl, listening very intently, tried to clarify this.

*"Do you mean last term, you said last year? We weren't here last year."*  
*(Introduction to Forensics 16-10-01, transcript, paragraph 15).*

The teacher then realised that she needed to clarify what went on last year, as the girls obviously did not have the same background as she did. I also did not realise as I had observed the same unit the previous year and knew what the teacher was referring to, as did the other teachers who had all taken the unit last year. I say girls because I am assuming that others would have been in the same situation as this girl but had not asked the question. Still others may very well have been able to understand what the teacher was referring to, not needing to have it clarified. This relates to Bernstein's framework in that the teacher has the recognition rules and realisation rules necessary but forgets that the students do not necessarily have this background but never the less proceeds assuming they have. If one girl had not been listening attentively and had the where-with-all to ask her question, the teacher may never have explained about last year's Year 7 group and the girls would never be provided with the necessary background for them to clearly recognise the situation. This difference is not embedded within the social class, which concerns Bernstein, but can be seen to operate within groupings

which would be classified as homogeneously belonging to the middle classes. This would mean that there really shouldn't be any difference in recognition and realisation rules, according to a simplistic view of Bernstein, as teacher and students all belong to the same homogeneous cultural group. Obviously differences can occur at much more subtle levels of culture or social groupings. Differences in experiences can be enough to affect the possession, or not, of recognition rules without them necessarily needing to be tied to distinct social classes. An awareness of Bernstein's code can be useful in providing the sense of culture or social understandings that may not initially be obvious in a given situation.

The lesson continued with the students being given all of the instructions they would need to complete the task over the next two weeks. All the while the teacher continued bringing up on the screen the articles the girls would find on their laptops when they accessed the school intranet so that they could see what they looked like and know where to find them when they had their turn before the end of the day.

*There is also another task, which is mapping. Now if you click onto the links here where Aunt Mimi has to find her destiny there is a map and I have got for you ten copies for each class of maps from the street directory and you are going to have to follow the instructions and there's also some **extra bonus points** that you can get. To get the extra bonus points I've given you a few problems that you have to solve and you'll need to use your problem-solving ability, a white pages, a street directory and a phone book, that sort of thing; all of those types of things to help you solve that crime. So that's the Finding Your Destiny Thing. So all of you have to do that. (Pause)... and this is the other task, task four, which everyone also needs to do, is you need to do a survey. ... I also have given you examples from last year. So Ming and LingLi and for those people that were helping were sitting just over there they did this assignment last year, in class, and I've attached their work, their marked*

*work that they gave me, when they did this particular survey. So you can see all of the work and all of my marking, of course, and all the different types of graphs and things that they did. (Introduction to Forensics 16-10-01, transcript, paragraph 16)*

Those students, who were competitive by nature, would have picked up on the notion of bonus points and would already have drawn some conclusions as to how this unit was going to be assessed even though there had been no mention of assessment and the teachers had not really decided, at this point in time, what the format of the assessment would be. This refers back to another rule of Bernstein's, in order for an integrated unit of work to be successful it needs to be well thought out and have a clear view of the assessment. Obviously, successful has different meanings to different people and although the assessment had not been considered and was not determined until the end of the unit, the teachers and myself considered that the unit had been well worth running and the decision was made to run it again the following year. Perhaps assessment had subconsciously already been decided because with this style of integration the assessment of content knowledge was covered in the individual subjects and it was not necessary to test for this again. In fact, the science assessment for the forensics was scheduled for after the integrated unit, allowing time for the students to process what they had previously learnt in the science unit and put it into practise in the integrated unit before they were officially tested on this knowledge. The outcome of the integrated unit was then seen more as one of drawing knowledge together, which could be witnessed in the involvement of the girls and the final outcome of the trial. The actual unit provided a time for the teacher to reflect on the involvement and capabilities of the girls, time that is often not available.

The instructions kept coming and many girls were probably only partially listening although they were all very quiet and well behaved and still asking the odd question.

*In addition to all of that you have a continuous task which you will need to do every day, as soon as you come in to your class your teacher will ask you to sit down and make your plan. OK, and that's again a little hyperlink, brings it up on screen, and you make a plan so that you know what you have to do that day. Now I've left at the top of that page for you the things that you're doing. ... The trial will be held on Friday the 26<sup>th</sup> of October, which is next Friday. You've got one period before that, I think, to get sorted out, and then you've got to be ready for period three and four. No, "Oh I've forgotten this or I'm not ready yet." You must be ready to do it period three and four. (Introduction to Forensics 16-10-01, transcript, paragraph 16)*

*... So the first thing you need to do, once you have disappeared back down to your classrooms is that you need to get on to the network, you need to download all of this and then your teacher and you as a class, either it's up to you, the teachers will decide whether she's going to read it out to you, you're going to share it, or whether you're going to read it silently. I don't really mind what you do, but you guys need to decide that. And then this afternoon, before you disappear, you need to make the decisions about whose going to play which part in the trial. Ok, so as a group you need to decide that. (Introduction to Forensics 16-10-01, paragraph 18)*

The group meeting concluded and within five minutes all 82 girls had returned to their classrooms leaving the 28 girls belonging to the green group in the learning centre with their teacher who had just given the group run down of what was to be achieved during the next two weeks for the Integrated Forensic Science Unit. The other teachers had also gone to their classrooms to commence with their task of reading the story and determining groupings before the end of the day. I remained

to observe this group's encounter with the integrated forensic science unit.

The teacher pushed onwards getting the girls to download the folders from the school intranet and then open the file containing the story. Many girls appeared to have difficulty downloading the information and the teacher appeared to be getting angry as she was pushed for time and eager to move on with reading the story. Some girls who appeared to be having difficulties were overheard to say,

*“I can't get on” (Introduction to Forensics 16-10-01, transcript, paragraph 31).*

The teacher was heard to say to one girl,

*“You know why, because you play around with your laptop too much. Just go into it and do what you have to do.” (Introduction to Forensics 16-10-01, transcript, paragraph 31)*

Another girl was heard to say,

*“Why won't my computer load? (Pause) Yes! It restarted! Better than nothing, oh I feel so scared with it. Copy... Oh hurry!” (Introduction to Forensics 16-10-01, transcript, paragraph 35)*

Such anxious comments were heard and I couldn't help reflecting how difficult it must be in such a classroom to know whether the reasons for the delays were genuinely because equipment had failed or because girls were too rough, didn't understand how to do it or had just been too slow waking up to the fact that there was work for them to do!

The teacher spoke quite rapidly and left an unrealistically short time for the girls to complete what was required. Writings, such as this, helped me to understand what was being asked of the students and gave me a better appreciation of the lessons from their point of view. This in turn, gave me a better opportunity to analyse the data I collected, not as an adult or teacher, but as the student for whom it was intended.

## **The Analyses**

The main analyses chapters, Chapters 5 – 8, began with writings similar to the early attempt at analysis provided above. In Chapter Five I provide an analysis of the school culture in terms of Bernstein’s framework.

Chapter Eight deals with the analysis of, “The Integrated Forensic Science Unit” and the discipline-based unit “Above Our Heads”, based on the descriptive chapters of Six and Seven in terms of Bernstein’s framework. Once again, writing in different voices was used as a way of exploring this data.

The analysis culminates in the final chapter, which contains several propositional statements about integrated curricula and school culture.

## **Conclusion**

In this chapter I provide the background to the development of the research questions, including an outline of my own interests. I summarise my readings into the literature on integration, middle schooling and particularly, my introduction to the pedagogic code of Basil Bernstein. (An elaboration of Bernstein’s framework and a description of how it is used in the study are provided in Chapter Two). Finally in the introductory chapter, I provide an outline of the methodology and methods employed in my research.

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## Chapter Two: The Development of a Framework

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### Introduction

The previous chapter explored the background literature and gave the reasons behind the direction chosen for the thesis. This chapter focuses on the pedagogic code, developed by Basil Bernstein (1971a; 1971b; 1990; 1996; 2000). The code is used to develop a framework for my study of integrated curriculum practise in the middle school of an independent girls' school.

Here I attempt to explain my understanding of some of Bernstein's terms and how they can be recognised within the school context.

In addition, background literature about integration is presented. Bernstein's concept of integration and conditions that he felt necessary in order for integration to be sustained is discussed, followed by criticisms of his framework.

### The Development of a Framework

The following section deals with my journey through terminology used by Bernstein and the development of the study framework.

#### *Classification and Recognition Rules*

The possession of, what Bernstein called, *recognition rules* can be seen in people's reactions and mannerisms and judged by how effectively they navigate themselves around the space of the culture involved. This arrangement is largely defined by *power relationships* and within a school can be seen in the structure of the timetabling and the arrangement of and use made of the spaces within the school, not

just classrooms and halls etc., but also in the arrangement of the subjects and the importance they assume in the timetabling. In Bernstein's theory (1971b), power relations are responsible for the creation of *boundaries* or divisions, between groups of people, between different categories of discourse (such as school subjects) and between different agents. The power relation is what is defined by the word *classification*. Classification is what determines the power attributed to one object over another. At the curriculum level it would be about the differences that exist between the subjects and the resulting power or status awarded to one subject over another. This status or power of the subjects can be seen in the positioning, those regarded with more importance assume, in the timetabling and the facilities and resources allocated to them. Use has been made of this way of describing arrangements within the school studied.

It is the creation of boundaries that is responsible for providing the cultural rules that cause divisions within society and in this case, the school under observation. For this to happen, power operates on the relations between categories and is responsible for creating social classes and socially justifiable relations of order. In my understanding, a study incorporating an analysis of power relationships as part of the framework should help to identify some of the reasons behind what is adopted as part of the curriculum at a specific school with particular emphasis on integration.

As previously stated, Bernstein used the concept of classification to define the relationships between categories. Classification can refer to the attributes between, for example, 'subjects'. He argued that what creates the space for the discourse, such as science, is what is in the space between that discourse and another, such as music. In fact, the meanings of the subjects are only understandable in the relationship the subjects have with each other. This could be transferred to the relationships between the different bodies of power within a school as easily as it could be between the different subjects and I have made use of this in my analysis found in chapters five and eight. It is the *insulation* of the subject that allows it to retain its identity and if that insulation is threatened then the subject is in danger of losing its identity and hence teachers who have a strong affinity for their particular subject area would feel personally threatened by anything that would threaten the subject's identity, such as the development of a middle school based on a different philosophy observed in my study.

The strength of classification of the school-based curricula has changed through the decades resulting in the current position. In the nineteenth century, knowledge was arranged in areas that created a unique and singular position. Subjects such as physics, chemistry, sociology, and psychology are, for Bernstein, examples of such *singular knowledge structures*. In the latter half of the twentieth century there was a change in the classification of knowledge. Knowledge, according to Bernstein, has become *regionalised*. This has occurred because of the development of subjects that have made use of different aspects of more than one singular. These recontextualising principles have resulted in areas of study, such as, medicine, architecture, engineering, information science etc. This regionalisation of knowledge has resulted in the weakening of classification and a shift in the power structures behind the reclassification process. In relation to schools, Bernstein sees strong classification as being a hindrance to staff being able to carry out their intrinsic function, that of pedagogic discourse. As most private schools must rely on their reputation as academically excellent schools for their survival, or fill some other niche, it would be expected that the managerial hierarchy in such a school would be strongly classified and thus difficulties would be expected to arise for teachers attempting to implement integrated and thereby weakly framed methods of study. This thesis attempts to explore this surmise. This is not a problem where weak classification occurs but this weak classification makes the organisation very vulnerable because communication from outside is less controlled. The staff members belong to a strong social network, which should be concerned with the integration of difference if the organisation is to work. By using Bernstein's framework and defining areas of classification and *framing*, method of transmission of realisation rules (see next section), it is hoped that a better understanding of the curriculum units investigated and their functioning within the grammar of the school can be gained.

Goodson (1983) remarked that different styles of curricula revolve around three main forms of curriculum development. These three styles of curricula are:

- The academic curriculum, for those belonging to the middle to upper classes where there is the assumption that the student will pursue a profession and that manual or vocational work is beneath their social status and focuses on

traditional academic subjects which have gained high status through social means.

- The utilitarian curriculum, for those of lower socio-economic status who are most likely to end up working in a manual job. And
- The pedagogic curriculum, designed around how a child learns and emphasizing the well-rounded individual, which, according to Goodson is largely reserved for students of lower capabilities and not for those who are academically able.

The school investigated serves, in Goodson's terms, the middle to upper classes and spreads its resources between the academic and the pedagogic curricula because of the belief in the merits of a well-rounded education for girls. The school emphasises both academic excellence and a co-curricular programme intended to develop "other interests." This study hopes to better understand how these curriculum practices manage to work in a strongly classified environment. Bernstein's framework has largely been used to explore issues of linguistics in the lower social classes and hence has not been used, as far as I can tell, in pursuing curricula developed in middle to upper class schools.

Power structures are easily recognised by individuals for whom status is part of their culture and students who recognise this understand the culture of the school that is based on this power. At the level of the classroom, power can take on different faces. The teacher is typically the authority figure in the classroom and is allocated the greatest amount of power, although this isn't always the case. This can be witnessed in the social arrangements in the classroom and an apparent 'pecking order' where some students assume greater degrees of power than others because of their social standing amongst the group and also because of the manner in which the teacher regards them.

All of these multifaceted relationships have a bearing on the physical structure of the school and the positioning within this structure of subjects, teachers and the students and on the type of curriculum that can be adopted and implemented. These power relationships determine what methods of instructional practise can be adopted by a teacher, but if the teacher or students do not possess adequate recognition rules of these power structures then inappropriate methods of instruction may be selected.

Bernstein's idea was that, whatever the conscious intent, culture is replicated and modified, in part, due to transmissions of mannerisms and values within the educational experience. It is an understanding of these aspects of the culture that is important for an individual to possess if he/she is going to be able to function effectively within the culture. Bernstein indicated the concept of this, in his work, in terms of recognition and *realisation* rules. In order to operate effectively within a particular society an individual needs to possess both the recognition and realisation rules of that society and therefore this study will attempt to define these rules for the individuals making up the study.

Daniels (1987; 1989) determined that the recognition rules seem to be formed outside of the school. This is why parent interviews have been included in the data to reveal any insights into this area of home life and the development of recognition rules. The development of recognition rules in an individual is strongly related to the concept of classification and hence of power relationships within the culture.

Classification can be used to indicate the strength of the relationships between categories. If these principles change in strength so does the classification. The allocation of the strength of the classification can be arbitrary in that it reveals itself in power relationships. How to define these relationships and categorise them can be very dependant on the perception of the observer. Blurring of boundaries between categories is the indicator, in Bernstein's model, of *de-classification*. According to Bernstein (2000) there are two extremes of classification, one called the *collection code*, which represents strong classification and framing and the other representing weak classification and framing, called the *integrated code*. At the classroom level, 'the contents' of the school day, can be described in terms of the curriculum as consisting of these two main types.

- Collection i.e., subject or content driven, with clearly defined boundaries and both teachers and students having little control over what is taught or
- Integrated i.e., having a more weakly defined boundary and content relevant to other areas of discipline giving the student much more control over what it is they learn.

The two divisions of educational knowledge, i.e., collection code and integrated code, form the basis of Bernstein's theory. These educational codes are "the means

by which power and social control are realised and the way they are transmitted and enter the public conscious, forming opinion” (Bernstein, 1971b).

The actual strength of classification is not absolute; it is necessary to measure the perceived strength relative to something else. The allocation of a  $C^{--}$  for very weak classification and  $C^{++}$  for very strong classification can be found in Daniels’ PhD thesis (1987). His coding rules can be found in Appendix 1 of his thesis and the following is an excerpt of their use.

Instructional Practice

Context

- $C^{--}$  Children working in groups or as individuals and pursuing different tasks
- $C^{-}$  As above but similar tasks
- $C^{+}$  Classwork as individuals but different tasks
- $C^{++}$  Classwork as individuals but same tasks (p. 397)

A similar analytic schema will be developed in my research.

A model describing the values of classification could be thought of as a straight line, at one end would be the collection code requiring strong classification and at the opposing end the integrated code displaying weak classification. In this study the determination of the strength of classification has been arrived at by considering as many factors that contribute to power relationships as possible and determining where these would rank compared to what would be expected of a situation found at either end of the line. A final ranking could be arrived at by looking at an average position of these relationships along this line (Figure 1). Obviously, this type of measurement is subjective but accompanied by thick data describing the situation, in the form of a narrative, should allow for understanding and further comparisons.



Figure 1. A model capable of showing the range of values of classification.

### ***Framing and Realisation Rules***

Realisation rules refer to the ability of the person to communicate what they know in a manner that is acceptable and understandable to the others within the culture, in the case of this study, of the school environment. It was Bernstein's belief that, schools developed by middle-class educators for students from low socio-economic cultures are not able to adequately educate these students because the students do not possess the recognition and realisation rules of that culture and therefore find it difficult to assimilate into what is effectively, for them, a totally different culture (Bernstein, 1996). The added dilemma is that the teachers themselves usually do not possess the recognition rules of the students and therefore have a completely different perception of what is happening within the school culture. It was thought that this framework could help in identifying the recognition and realisation rules of the principal, teachers, students and their parents involved in this study and thereby be used to discover some of the reasons behind the adoption of integrated units.

Framing is the method by which the realisation of power arrangements is transmitted. It includes the *Regulative Discourse*, which provides instances of social recognition and attempts to give the acquirer the necessary skills to manoeuvre around the space of the classroom and the school. This is considered by Bernstein to be the basic root of framing issues. The *Instructional Discourse* is found firmly embedded within this regulative discourse. This instructional discourse aims to give the acquirer the necessary skills to communicate within the particular subject area in question. It is not enough for the student to recognise the culture of the school and the particular subject areas. Being able to communicate in a manner appropriate to the area of study is a necessary skill for a student to possess if that student wishes to be successful within that particular area of study. The ability to communicate in an appropriate manner is described as the student possessing the appropriate realisation rules. Daniels (1987; 1989) discovered in his research of four schools with differing degrees of classification and framing, that those schools with weaker classification and framing values produced students who were able to recognise text as belonging to art or science but they were unable to produce text that their teachers could identify as belonging to the appropriate context. He inferred from this that the weaker values of classification and framing did not instil in students the necessary realisation rules to produce text in a specific subject area. It did however appear that

the students possessed the appropriate recognition skills. Morais (1992), in her research, determined that the possession of appropriate recognition rules was highly correlated to the pupils' social class but also was related to pedagogic practices which reflected principles of strong classification and framing. This could be important when considering a curriculum incorporating integration, which consists of weakened values of classification and framing such as in this study.

Are these factors at play and identifiable when the cultural differences are not so obvious and can I use them to describe the curriculum? Is the development of recognition and realisation rules compromised by an integrated curriculum, which is described as having weak values of classification and/or framing in Bernstein's pedagogic code? Is it possible to use this framework to come to a better understanding of the type of integration occurring within a particular school environment and use it to further develop the style of integration so that it is more compatible with the culture of the school? Could it help teachers to visualise better what "works" and the reasons for this and so make the process of integration easier or more effective? These were all questions occurring to me as I read more about this framework.

### **Development of a Framework for Realisation Rules**

The realisation rules posed added complications of identification and I therefore needed to explore their relationships in greater detail. Hence I established some criteria to be explored within the data relevant to this study. It was envisaged that the framework so developed would provide the structure for coding the data gathered during observations and interviews. I hoped that this framework would give me a better view of what teachers were able to do, in particular, the type and style of integration that they felt they were able to pursue within the particular school culture of this study.

Bernstein (1971a; 1971b; 1990; 1996; 2000) used the concept of the word framing to refer to the controls on communication between individuals in the pedagogic relationship such as between parents/children, teacher/pupil etc. Control is the means of educating individuals into power relationships by providing examples of the appropriate means of behaviour for different social divisions. It is the end product of this control that results in the realisation rules of the people involved within a social

grouping. “Control regulates and legitimises the communication in pedagogic relations” (Bernstein, 2000, p. 12). Framing is then about who has control over five main divisions within this pedagogic relationship.

- the *selection* of the communication;
- its *sequencing* (what comes first, what comes second);
- its *pacing* (the rate of expected acquisition);
- the *criteria of knowledge*; and
- the regulative discourse (control over the social base, which makes this transmission possible).

In general terms where framing is strong the transmitter, the teacher, has control over the selection, sequencing, pacing, criteria of knowledge and the social base. Where framing is weak the acquirer, the student, has more apparent control. During observations in this study it will be necessary to consider the roles played by the transmitter and the acquirer in relation to framing issues.

Bernstein (2000) calls the rules that control the social base the regulative discourse. This discourse can be strongly framed and in this case it would be necessary to look for descriptions about conduct, character and manner such as conscientious, attentive, industrious, careful or receptive. If the discourse were weakly framed it would be necessary to look for descriptions such as creative, interactive, attempts to make his or her own mark etc.

The other aspects of framing (i.e., the selection, sequencing, pacing and criteria of knowledge) are referred to as making up the instructional discourse. The instructional discourse is strongly influenced by the regulative discourse, which determines the basic rules of instruction. The strength of the framing can vary between the parts of the instructional discourse and also between the two types of discourse. It is possible to have strong framing over the instructional discourse (where the teacher makes the choices) and either strong or weak framing over the regulative discourse. According to Bernstein (2000) where there is weak framing over the instructional discourse (where the student is in control of the choices) there must also be weak framing over the regulative discourse.

Framing may be external to the school and, in this case, impact on the control of communication from outside the school and how it will enter the school. I will not

consider external framing issues but rather concentrate on developing a cohesive idea of the framing within the school environment. I will, however, analyse interviews taken with parents of children within the school. This could be classified as external framing but I will incorporate it into the internal framing of the school. This is because, being an independent girls' school, the parents' ideas need to be strongly addressed within the school. If the recognition rules of the parents are not compatible with those of the school, the parents will remove their children and go elsewhere. This should imply that a certain degree of uniformity between culture groups within the school exists, if such groupings do actually occur.

Internal framing refers to the control over the selection, timing, pacing and organisation of knowledge within the school and also the social discourse between the people making up the school. Knowledge of these areas can be gleaned from the timetable, official documents and procedures and from general observations of the functioning of the school and the classes involved.

A simple model of framing would be a line, at one end strong framing and, at the opposing end, weak framing (Figure 2).

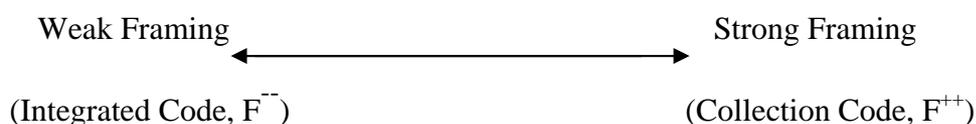


Figure 2. A model capable of showing the range of values of framing.

Aspects such as, conduct, character and manner, inform the regulative discourse which provides the socially acceptable rules for informing the instructional discourse. These rules, together with input from the transmitter's closely held views of the criteria of knowledge, which is intimately influenced by the regulative discourse, provide the direction required for the transmitter to make decisions about the selection, sequencing and pacing of the instructional discourse. The end consequence of this interplay is that realisation rules crystallise in the acquirer's mind and the acquirer becomes conscious of what is required and equipped with the means of communicating this in acceptable ways. These realisation rules themselves begin to influence the regulative discourse thus setting up a dynamic flow and interchange between the discourses and their resultant realisation rules (Figure 3).

## Framing

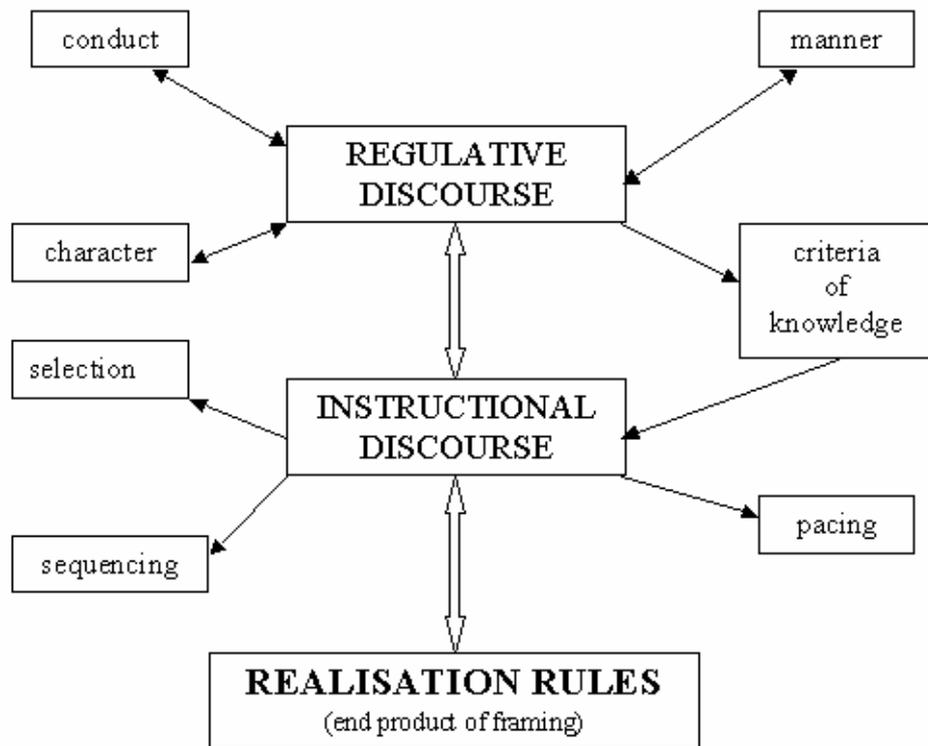


Figure 3. A model providing the framework for analysis of categories of the discourse of framing.

### Uses of this Framework

This framework can be used to develop coding orientations, which help, in my case, to identify the grammar of a school and the matching orientations found in both an integrated unit of study and a discipline-based unit of study. Because of the subjective nature of the analysis it is necessary to include thick descriptions in the form of narratives to support the findings.

Support for an approach that examines the grammar of the school can be found in Beane (1998a). *Re-situating* and *transformation* are two different ways that Beane proposes to change the culture of the curriculum at a school level. The school in my case study elected to introduce changes towards an integrated curriculum working within the culture of the traditional subject curriculum. This is a prime example of re-situating the new curriculum. The approach requires less energy fighting against a well-entrenched system and can be seen as an attempt to satisfy everyone without becoming too radical. Transformation is a complete reconfiguration attempt without

being sensitive to the culture that gave rise to the separate subject based curriculum. As such it will meet great resistance and require great discipline and energy to fight against the established culture long enough for change to be wrought. Bernstein's pedagogic code used as a framework for the study supplies the direction for thinking about the culture of schools and investigating what is possible or desirable within a school culture. It allows the wider context of the social basis to be considered as a valid contributor to decisions made about curriculum design.

### A Mapping Tool

After developing a thick description (Chapters Four, Six and Seven) using the framework described to explore the areas of classification, framing, recognition and realisation it should be possible to assign relative values to classification and framing for the units analysed and use them as the basis of a comparison. A comparison can be visualised better if a mapping tool is used. Parker (1994, p. 46) described the tool I have chosen to use in her doctoral thesis. She took the classification and framing lines of Bernstein's and superimposed them at right angles forming a grid onto which values of classification and framing could be mapped. She also incorporated into this the concept of high and low status knowledge from Young (1971) equating them to Bernstein's collection code and integrated code respectively.

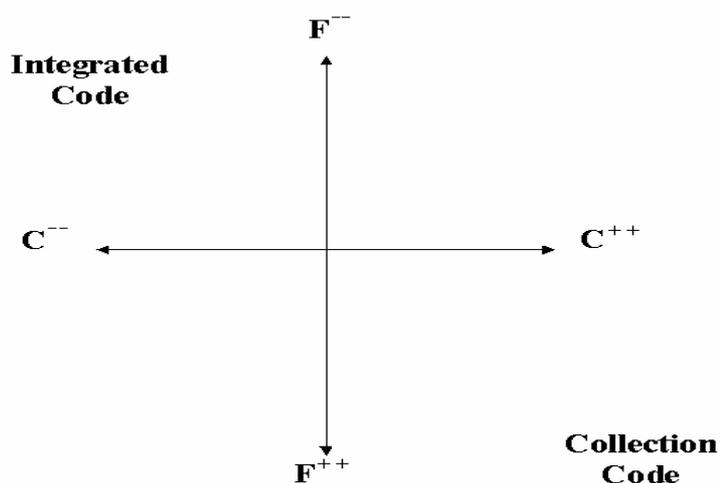


Figure 4. Reconceptualisation of Bernstein's model showing classification and framing values, based on Parker (1994).

Her argument was that those areas of the curriculum that are more integrated can be seen to be weakly classified and framed and therefore moving toward that area of the integrated code that relates to low status knowledge. Conversely, areas of the curriculum that mimic the collection code by being strongly classified and framed consist of high status knowledge and are therefore seen as being of greater value than the lower-status knowledge of the integrated code. De Brabander (2000), whilst investigating the conceptions that teachers hold regarding the knowledge they are transmitting also noted a difference in both status and power between different types of knowledge. High-status or "hard" knowledge referred to knowledge that was academic and specialised and characterised as testable, objective and established. Low-status or "soft" knowledge was characterised as not easily testable, subjective and relatively open to debate. General subjects were seen to offer knowledge that is called for on many occasions and specialised subjects offer knowledge that is useful on infrequent, special occasions. These views of knowledge and its status lend support for why integrated curricula find difficulty in being accepted as genuine forms of education.

Interestingly, Bratlinger (1998) found that middle-class, college-educated mothers who are often vocal supporters of liberal notions of open, integrated, multicultural, student-centred education tend to prefer the tried and tested ways of educating their own children in practice, and view progressive forms of education with apprehension. They prefer a "conservative practice, for factual, tightly-sequenced, subject-area-bound, Western-civilization-oriented curricula in which children of their class have traditionally established measurable competencies and uncontested superiority" (p. 433). Factors such as these reveal an insight into the difficulties of establishing an integrated curriculum for the majority when it is seen as being the type of curriculum best suited to low achievers who do not need high status knowledge. How useful it may or may not be for the masses still, for most, remains largely untested. The tendency to examine its relevance using a discipline-based framework skews the researchers approach to concentrating on the deficiencies from a discipline-based perspective rather than on finding strengths and weaknesses attributable to integration for the education of our youth (Venville, Wallace, Rennie, & Malone, 2002, p. 59). Venville et al note that other researchers who try to incorporate more holistic perspectives in their analyses report improvement in some

or all of the following areas attributable to integration; cooperation, collaboration, team work, motivation, problem solving, technical expertise, higher order thinking, application to real world problems, creativity and invention (p. 60). There are, however, others who find none or few differences between integrated and discipline-based curriculum methods of instruction.

## **Bernstein's Pedagogic Code and Views on Integration**

It can be seen that it is not possible to speak about the concept of classification without the concept of framing, "the framing of the pedagogic relations regulate in what way and if the boundary (classificatory relations) is acquired" (Bernstein, 2000). This pedagogic code can be used to examine a unit of study and describe it in relation to other units of study and the grammar of the school.

In Bernstein's (1971b) words, "integration refers minimally to the subordination of previously insulated subjects or courses to some relational idea, which blurs the boundaries between the subjects." (p. 53). It is not however "a type of intellectual interrelationship where one subject shares the theories of another." This implies that there is still in existence, for Bernstein, the idea of subject areas even if the boundaries are 'blurred'. And from his definition it appears impossible for integration to occur without subject boundaries for without the boundaries there would be no possibility of the 'blurring of boundaries' necessary for integration. These boundaries are determined by power relationships and therefore relate to classification. The blurring of the boundaries can also be described as de-classification.

Additionally, he saw the method of integration in terms of the composition of the teachers, which is more directly related to the idea of 'framing' as opposed to 'boundaries' or classification. It could be "integration referring to a group of teachers within a common subject or the extent to which integration involves teachers of different subjects" (p. 53).

Integration then, according to my interpretation of Bernstein could take on a myriad of faces concentrating mainly on issues of framing and in particular to do with the method of instruction or incorporating differences of both framing and classification attributes to create a course of study, integrated specifically to suite the grammar of the particular school. This implies that there is no right or wrong way to integrate and

discussions of dichotomies and polar opposites to explain Bernstein's integrated code and collection code are naive, to say the least.

However, Bernstein (1971b) believed that the vagueness inherent in an "integrated curriculum" could produce a system where both students and teachers have no real sense of purpose, place or time. To overcome this he suggested four criteria, which if not present, would result in the demise of the integrated curriculum (p. 64).

- There must be a very explicit consensus about the integrating idea.
- There must be implicit guides, which regulate and co-ordinate the behaviour of the individual teachers within the new guidelines. He makes a point here that a curriculum based on subject areas can get away with "mediocre" teachers whereas integration requires "greater powers of synthesis and analogy, and far more ability to both tolerate and enjoy ambiguity at the level of knowledge and social relationships."
- There needs to be a feedback system, which helps to guide both teachers and students. This is due to the relatively weak evaluative criteria that an integrated curriculum gives rise to.
- There needs to be clear criteria for evaluation.

These four criteria provide a structure for teachers and students to work within. This structure is not found in a very weakly defined course of study and without some guidelines the course could become very ill defined, leading people to question its value. This is a problem often encountered by teachers who are trying to provide an integrated course of study. What they value in the course is either not valued or not recognised as being of benefit to the student by others further removed from the course and the attempt is often seen as lacking in rigour. My study will need to consider these factors when analysing the extent of integration and the apparent successes and failures.

Bernstein proposes that when there is a change in society's classification and frame the interest in integration rekindles itself. On a smaller scale within the culture of the school, the conception of the middle school philosophy could be interpreted as a significant change to the culture of the school in this area and may be responsible for the rekindling of interest in supplying units that contain aspects of integration. The culture of the junior and senior schools has not been greatly affected by this change.

The lack of acceptance of the middle school within the senior school may reflect the fact that there have been no significant changes in senior school in the school's recent history apart from the implementation of vocational courses for those not able or willing to continue through to the external examination at the end of Year 12.

## **Criticisms of Bernstein's Framework**

Bernstein was not providing a how to do it manual, his task has far wider implications. He developed a language and model with which we can explore the intricacies of the development of curriculum, pedagogy and assessment. The different types of integration could almost all be found somewhere within his model and described in his terms of classification and framing. From his model it is easy to understand how the implementation of an integrated curriculum can threaten the existing order of power and control within and even external to education. Bernstein proposes that when there is a change in society's 'classification and frame' the interest in integration rekindles itself.

Hargreaves, Earl and Ryan (1996) suggest that Bernstein's concept of integrated and collection codes places them on either end of a dichotomy and therefore they can be seen as mutually exclusive. They feel that "such dichotomies make distinctions that are bald and simplistic". My understanding of Bernstein's theory is somewhat different. In Bernstein (1971b), there is a diagram explaining a study of the curricula found in England, Europe and USA. This diagram starts with Bernstein's concept of Codes and has both collection and integrated codes with a distinct arrow from collection to integrated and labelled as de-classification. This surely means that there is movement from one to the other. Bernstein's theory revolves around 'strong' and 'weak' classification and framing which emphasizes the capacity for many degrees of integration, putting his concept of integration in the realm of highly sophisticated and complex, not "bald and simplistic". It can be used to "capture the differences at any single point" something that Hargreaves et al (1996) find important (p. 103).

Parker (1994) translates Bernstein's theory as a continuum from a pure collection code to a pure integrated code. These codes can be described in terms of strong or weak classification and strong or weak framing thereby allocating subjects a position on a two dimensional grid. This allows a description of the subjects to be formed that will consider not only the degree of integration as a whole but give more information

about the subjects to enable us to ‘see’ in what way they are influenced by ‘other factors’. My interpretation is that Bernstein’s code for pedagogic knowledge is far more complex than a continuum allows for. If Hargreaves et al’s (1996) perception of Bernstein’s theory leads to an interpretation of “‘failed’ or ‘false’ integration, or even ‘disguised collection’ ” (p. 102), that “failure to meet all criteria of the integrative ideal” must be said to rest on an interpretation of Bernstein’s work different from my own. This said, the confusion that arises, due to different interpretations of the one theory, only adds to the dilemma of teachers when attempting to implement integration. Indirectly, this confusion supports the efforts of Bernstein to develop a language with which we can communicate our ideas about the pedagogy of knowledge.

## **The Research Questions**

The study looks in detail at the classification and framing found within a school environment, employing the pedagogic code of Basil Bernstein.

The following research questions will be addressed:

- How are the recognition rules and realisation rules of the school used in framing the curriculum?
- How are the selected units constructed in terms of ‘classification’ and ‘framing’?
- How does the classification and framing of these units match the recognition and realisation rules of the school?
- What are the similarities and differences between the units and what are their places within the curriculum of the school?

## **Conclusion**

In this chapter the reader has been introduced to the terminology that Bernstein has redefined to use within his framework. Classification, framing, recognition rules and realisation rules have been described in detail and the relationship of framing issues and realisation rules has been specifically addressed in the development of a model. From this model it can be seen that framing consists of two discourses, Instructional and Regulative and that the two discourses have a cyclical balance where each informs the other although the regulative discourse is seen as the one of most

importance because it directly influences the development of our culture and societies' expectations. The Instructional Discourse then depends on the rules and regulations of society to determine the sequencing, pacing, selection and the criteria of knowledge that can be utilised and as a consequence is embedded in the Regulative Discourse and determines the eventual acquisition of realisation rules, although many of these rules are also influence by the home environment and the social scene of the individual student.

A mapping tool was discussed to enhance visualisation of the final positioning of classification and framing values and their relationship to one another and the curriculum. In the final chapter this mapping tool undergoes extensive changes to enable it to better represent the data collected.

Bernstein's own views on integration as a concept for the development of a curriculum have then been addressed and his own list of requirements necessary for integration to be successfully utilised in schools given. These requirements were addressed when collecting and analysing the data.

In the next chapter my theoretical perceptions and their influence on methods utilised during data collection and analysis will be encountered.

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## Chapter Three: Methodology and Methods

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### Introduction

In the previous chapter I explained the theoretical framework used to guide the study. In this chapter I outline the methods I used for the collection and analysis of the data, and the relationship between these methods and my own theoretical perspective.

A discussion about methods would not be complete without explaining my own understandings of the theory behind these methods. Initially I struggled to define my methodology not fully understanding what it was I was doing.

I acknowledge that I could not have written this section at the beginning of my journey. Reflecting on the process, however, has enlightened me about the uses of Bernstein's framework, as within it are guides that have helped me along the way. Many people have criticised Bernstein's work because of the dense nature of the writing. From the beginning I felt that this was not justified because for Bernstein to explain his perspective he needed to re-define terminology. It was my unfamiliarity with this terminology that made the reading of his ideas hard going. I realised this early on but did not link this with the difficulties I was experiencing with the methodologies until more recently. It is relatively easy to make summaries of epistemologies that relate to what you think you believe. It is another matter all together to put them into a coherent form.

I was also frustrated by experienced researchers telling me that this was the easiest chapter to write when for me it was proving one of the most difficult. I now realise that it is easy for experienced researchers because they have become accustomed to the terminology and the meanings and can use them as part of their vocabulary.

Often they also work within a defined theoretical perspective for much of their research whereas I used a range of methods and methodologies. I now realise that my difficulties can be explained by Bernstein's framework, in particular, the acquirement of recognition and realisation rules. For much of my time doing this PhD I have possessed the recognition rules associated with the development of epistemological belief systems but have not had the terminology necessary to write about them in a manner that would indicate an ownership of these systems. In Bernstein's terminology, I have possessed the recognition rules but not the realisation rules. These realisation rules are developing slowly as I begin to associate certain terminology with my own ideas. My situation mirrors the difficulties that different cultural groups experience in the education system. These difficulties relate to the development of the realisation rules belonging to the educational, academic researchers. The process of completing a PhD is an initiation into this paradigm. This chapter commences with my understanding of and reasons why a qualitative approach was adopted. Next come the research questions and a discussion of the methods flowing from these questions. I then attempt to explain my methodological perspective with a brief discussion of some of the epistemologies that inform this perspective. I discuss ethical considerations and then elaborate on the methods and techniques used during the data collection and analysis.

### ***What is Qualitative Research?***

There appear to be many differing ways of doing of qualitative research but most seem to involve an attempt to gain a complete picture of the research questions within the natural environment. A variety of data collection techniques and analytical tools are employed and sample-sizes are typically small. The research quest can often be portrayed as a metaphorical journey of discovery.

Creswell (1998) defines qualitative research as

... an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting. (p. 15)

Punch (1998), in a discussion distinguishing between quantitative and qualitative research, describes the latter as

Dealing with cases. It is sensitive to context and process, to lived experience and to local groundedness, and the researcher tries to get closer to what is being studied. It aims for in-depth and holistic understanding, in order to do justice to the complexity of social life. Samples are usually small, and its sampling is guided by theoretical rather than probabilistic considerations. Prestructuring of design and data is less common, and its methods are less formalised than those in the quantitative approach. It therefore has greater flexibility. (p. 243)

Some, such as Punch (1998), make use of a comparison with quantitative research methods when defining qualitative research procedures. Others, such as Crotty (1998), prefer to say that the two types of research are not mutually exclusive and that they can stem from the same epistemological bases. In fact, much quantitative research includes qualitative data collection and analysis and much qualitative research makes use of quantitative techniques.

My interpretation of qualitative research is that by painting as broad a picture as possible, using a variety of different data collection techniques and by analysing the data through different lenses it is possible to arrive at a broad and meaningful description of the situation. In order to communicate to others, one needs to use a rich and varied language to put into words that which cannot easily be expressed (Eisner, 1991). In keeping with the intent of qualitative research I prefer the use of the term *crystallisation* (Richardson, 2000) when speaking of the use of multiple methods, rather than triangulation. This latter metaphor carries with it the image of a mathematical procedure adding rigour and discipline in one sense but in another sense, restricting the research to one of scientific method and a positivist framework where variables are few and can be controlled or manipulated.

Am I capable of being a bricoleur and producing a bricolage as the end point of my investigation? According to Denzin and Lincoln (1998), “the *bricoleur* produces a *bricolage*, that is, a pieced together, close-knit set of practices that provide solutions to a problem in a concrete situation” (p. 3) (emphasis in the original). This perspective means that the qualitative researcher needs to be adaptable and able to

perform a number of different tasks. The researcher must be knowledgeable about the different paradigms that play a role in a particular problem and understand that the research process is interactive. The process and analysis will change depending on the researcher's personal experiences, gender, social class, race and ethnicity, and the personal, social, and cultural context of the people found within the setting.

Crotty (1998) provides a different understanding of bricoleur as drawn from the text of Levi-Strauss.

It is the notion of a person who makes something new out of a range of materials that had previously made up something different. The *bricoleur* is a makeshift artisan, armed with a collection of bits and pieces that were once standard parts of a certain whole but which the *bricoleur*, as *bricoleur*, now reconceives as parts of a new whole. (p. 50, emphasis in original)

The difference in interpretation here is placed on the emphasis of who or what is responsible for the reconstructing of the situation. Is it the skill of the bricoleur in procuring the data and building the picture that is of prime importance (Denzin & Lincoln, 1998) or the data, which lends itself to the multiple interpretations possible (Crotty, 1998)?

According to Crotty (1998) I should not be concerning myself with questions about my capability to perform the task at hand but rather asking myself, "What can be made of these items? What do they lend themselves to becoming?"

These questions find answers, in my opinion, when one adopts the essence of a bricoleur and plunges headlong into qualitative research. As aptly explained by Crotty (1998).

Research in constructivist vein, research in the mode of the *bricoleur*, requires that we not remain straight jacketed by the conventional meanings we have been taught to associate with the object. Instead, such research invites us to approach the object in a radical spirit of openness to its potential for new or richer meaning. It is an invitation to reinterpretation. (p. 51, emphasis in original)

From this quote it can be seen that in Crotty's (1998) opinion constructivism plays a role in much qualitative research as he is equating constructivism and the ability to act as a bricoleur within the research paradigm. Constructivism will therefore be considered in some detail later in the chapter.

### ***Why Qualitative Research?***

My choice of qualitative research methods was not a stab in the dark, nor was it an attempt to avoid research that could be considered by some as more 'rigorous', or to avoid statistics at all costs. Indeed my university studies in genetics and biomathematics were both rigorous and laden with statistics. My motivation has always been to study that which fascinated me and would contribute to my development as a learner.

A lot of time has passed between my earlier studies and my entering this doctoral program. I have come to the gradual awakening that science no longer holds absolute truths for me, as it did in my early education. I seem to have progressed outside of the belief in the absolute nature of science that belonged to the positivist side of my nature. I have come to understand that the truths of today are very likely to become falsehoods of tomorrow. Nothing is ever quite what it seems to be and every person has his or her own unique idea and way of thinking. There may be similarities that can be seen and used to make a form of generalisation but there are many exceptions to the rule, as speakers of the English language would understand. This feeling of mine grew as I pursued the role of motherhood, raising three very beautiful and unique daughters.

This does not mean that I no longer believe in the efforts of science. To the contrary, I firmly believe that science will always make a valuable contribution to society but it is one contribution of many. In education, we are not dealing with science exclusively, so why should scientific methods predominate? I want to paint as complete a picture as possible, not just one small aspect, which can readily be studied out of context and then neatly fitted into its predetermined spot. How can I guarantee that a spot of the exact shape needed is waiting for my efforts to slot into? Obviously I can't, so what I have done in this study is adopt a number of strategies, so as to portray a situation that others can take on board and work with, drawing their own conclusions.

## *Choice of Methods and the Research Questions*

The framework within which I am working determines my choice of available methods. The process of developing my own frame of reference is cyclical, or perhaps spiral, as I prefer the image of modifying and developing my ideas and coming to a familiar and yet new position by modifying of my own preconceptions. Because my own ideas are unique, it is necessary that I be explicit about them.

The adoption of a qualitative research design allows me to choose data collection techniques that can be used to share my observations of the case and to attempt to represent the data from a variety of perspectives. Just as the types of questions I have suggest a qualitative methodology, these same questions demand a particular set of methods.

The purpose of the proposed research study was to come to a better understanding of the pedagogic code within a school. In order to arrive at a better understanding of the form of the curriculum I found it necessary to take a closer look at the power and control relationships within the different levels of the school.

The following research questions were addressed.

- How are the recognition rules and realisation rules of the school used in framing the curriculum?
- How are the selected units constructed in terms of ‘classification’ and ‘framing’?
- How does the classification and framing of these units match the recognition and realisation rules of the school?
- What are the similarities and differences between the units and what are their places within the curriculum of the school?

These questions are largely asking “how ...” and are best able to be answered by a qualitative study which allows time to explore the case in question and provide data which can be used to provide a detailed view of the topic within its natural setting (Creswell, 1998).

How I justify the use of certain methods and the adoption of a methodology can be explained by delving into my beliefs about knowledge and the research process. In order to do this I have chosen to follow a multilayered framework provided by Crotty

(1998, p. 4), which shows the relationship between epistemologies, theoretical perspectives, methodologies and the methods adopted.

## **Epistemology**

Epistemology, according to Crotty (1998), is concerned with the understanding of what it means to know. In the following section I explore the meanings of branches of epistemology that influence my theoretical perspective and hence the style of research and methods adopted.

### ***Constructionism/Constructivism?***

There is much debate in the current literature surrounding the meaning of constructionism and constructivism. This debate is exemplified in the above heading taken from the title of Richards' chapter (1995). Richards admonishes the reader to take their pick, is it to be "construct[ion/iv]ism"? Both epistemologies inform my own theoretical perspective and constructionism, in particular, informs my understanding of Bernstein's framework. My understandings of these epistemologies follow.

### **Social Constructionism**

Social constructionism refers to the meaning making being developed by a group through group processes involving social dialogue such as interactions between individuals and a consensus on meaning using language, cultural dialogue etc. It is the consensus of meaning that is pertinent to the specific locale or sociohistorical context, and emphasises the use of language as predominantly for purposes of communication between the group and not necessary for the development of the individual's meaning making (Gergen, 1995).

Social constructionism has much in common with many of the ideas of Vygotsky. However, for Vygotsky (Daniels, 2001), much of his work centred around the idea of the Zone of Proximal Development (ZPD) being a place in an individual's knowledge which could be stimulated by offering suggestions and props to enhance cognitive development and enable the individual to complete tasks which alone they were incapable of completing. The emphasis of ZPD falls on the individual's development and possibly the social/cultural interactions that were necessary to enhance the capabilities of the individual but not, according to Gergen (1995) on the

group or shared meanings that emerge from the exercise. Shotter (1995,) disagrees with Gergen. He understands Vygotsky's work to emphasise the social and the development of linguistically shared meanings, which constitute the means of organising activities and behaviours. It is this aspect of Vygotsky's work that Bernstein (2000) has made use of in the development of his own theory and that I have adopted to use partially on a group understanding of knowledge construction but also from an individual's perspective.

### **Constructivism**

There appear to be many degrees or forms of constructivism but they all purport to be a way of describing or explaining the process of developing the individual's knowledge which makes use of that individual's pre-existing knowledge structures, in short, a theory about the construction of knowledge. If we could understand how individuals develop their structure of knowledge and what factors influence the development of knowledge types then we would be better able to adapt our teaching to the individual. This theory would, of necessity, be a generalisation of observable phenomena and could not possibly apply to all individuals equally well.

Jean Piaget has been credited with developing the values that gave rise to simplest form of constructivism (von Glasersfeld, 1995). In this form it is implied that knowledge is not passively received from the environment but actively constructed by the individual. In its simplest form it is often referred to as trivial constructivism. This postulate then raises the question of what is implied by the use of the word environment. Do teachers and classrooms belong to this descriptor? Does this mean that students, sitting in a typical classroom will all be making different meanings from the teacher's instructions? Will they absorb the literal meaning as a sponge would soak up water or will they end up with different understandings built from the same instructions? Our experience as teachers seems to indicate the latter, but why? What is happening within the individual mind to make the process of teaching so complicated? I have used Bernstein's framework as a means of looking at these environmental factors that interact to inform a social grouping and the development of a culture for the participants in this study. To do this I needed to look at the many factors that could inform the environment of the classroom under observation. However, this framework does not allow me to see into the workings of the

individual mind and for this I had to rely on my own experiences and interpretations of the individuals involved. In other words, I have constructed my own sense of the meanings inherent in certain acts of the participants involved in the study and believe that these interpretations are influenced by my own experiences. This means that this thesis has been written from the perspective of a social constructivist/constructionist.

A theory that revolves around the construction of knowledge based on an individual's pre-existing knowledge and experiences will of necessity mean that each person will have a different referent for the construction of their own knowledge. Therefore truth becomes non-existent as a universal factor and must be seen as relative to the individual's perception and understanding. Some truths can be more universally agreed upon than others but there can never be absolute truths, as we have no unqualified way of knowing. For me this is reflected in Bernstein's postulate that members of the lower working classes have a different system of recognition and realisation rules compared to the middle and upper classes and thus can be used to reconfirm that these rules are culturally determined. Culturally determined, to me, is another way of reaffirming that individuals develop their knowledge on the basis of their experiences and that members of a cultural group will have similar experiences. Taking this argument further implies that all members of a classroom will have certain similarities in their overall experiences but because they are all unique, even though they could be classified as belonging to the same social grouping, will ensure that they each possess differing degrees of appropriate recognition and realisation rules for the classroom and school setting. This is what I believed when I entered the research phase of my journey and why Bernstein's theory was so attractive to me.

Other forms of constructivism such as social, cultural and critical constructivism attempt to take into account alternative aspects of our environment. It is not that the social and cultural contexts are ignored in the basic forms of constructivism but that these aspects of the environment are not a focus of the particular type of constructivism. Alternative names have been developed to place the focus more on certain aspects of the environment. I believe that the social and cultural contexts play a large role in the development of an individual's knowledge system, hence my use of Bernstein's (2000) work.

## **Social and Cultural Constructivism**

Social and cultural constructivism and the merging of the two in contextual constructivism still retain the emphasis on the individual's construction of knowledge. In principle there are many similarities between constructionism and constructivism where social and cultural contexts are taken into account as the individual develops or constructs understandings. It has been said that social constructivism "is primarily an individualistic understanding of the constructionist position" (Crotty, 1998, p. 58).

Social and cultural constructivism, contain for me many similarities. I find it difficult to define what it is that pertains strictly to social without being, at the same time, a part of the cultural context and vice versa. Trivial and radical constructivisms are centred on the idea of the individual, in the construction of their own knowledge. Social constructivism revolves around the premise that individuals are not alone but are closely connected with others when constructing their own knowledge (Ernest, 1995). The focus is on the development of interactions between individuals, as well as the individual's own efforts in the construction of their knowledge. The concept of a person existing completely alone becomes non-existent.

When one considers the implications of incorporating social influences into the construction of an individual's knowledge it becomes apparent that we shape our reactions to the world with how others perceive us, and how we perceive others. Often these perceptions are based purely on what we see in front of us and we may judge a person by their appearances and how these appearances relate to others that we have built an image of in our minds. The more intimate our knowledge of a person or subject, the more likely that language has been used in building up part of that image. Language is therefore an aspect of the culture that impinges on our social interactions and hence the construction of an individual knowledge system.

Language is being developed and modified by social interactions and should not be thought of as static but a continuous developmental process. Meanings imparted by language are instrumental in cultural constructivism but it is the social process that defines and refines the language meanings. Certain groupings within society can share common languages but may consist of several independent groups within the culture because of differences in shared meanings within their language constructs. Bernstein's (2000) recognition and realisation rules are built on the same premise.

The feeling that social and cultural constructivism are somehow intertwined moves one into the realm of contextual constructivism (Cobern, 1993). Contextual constructivism takes into account the background, in particular, the social and cultural circumstances of students when they are constructing new knowledge or alternative knowledge systems. Cobern (1993) emphasises that, "...science education is successful only to the extent that science can find a niche in the cognitive *and* socio-cultural milieu of students" (p. 57). In order for educators to know this milieu of students, research is required that incorporates both social and cultural constructivism into its philosophy. This rang especially true for me as I examined the possibility of a narrowly defined research project, or one that encompassed the environment of each student as contributing to the individual's acquirement of the grammar of the school.

Social constructivism and likewise, contextual constructivism, are difficult paradigms to operate within because it is impossible to accurately interpret another person's understanding. There is no privileged view and this gives rise to problems of knowing for the researcher.

## **Theoretical Perspective**

A social constructionist/constructivist epistemology creates guidelines by which the methodology of the research can be determined. My understandings of knowledge and its construction have led me to adopt a theoretical framework, which has been developed from my understanding of the world that fits within a social constructionist/constructivist belief system. This framework is a theory to guide the interpretation of the data collected, and also the types of data to be collected. My final analysis is not the only interpretation possible from this data, nor can it be claimed to be the "truth". It is an interpretation of reality as I know and understand it, and this interpretation may change as my experiences grow.

My first three research questions,

- How are the recognition rules and realisation rules of the school used in framing the curriculum?
- How are the selected units constructed in terms of 'classification' and 'framing'?

- How does the classification and framing of these units match the recognition and realisation rules of the school?

require a focus on meanings and interpretations in order to be adequately answered, and therefore must use the methodologies of a qualitative research method. Morais (1992) and Daniels (1987; 1989; 1995), used quantitative methods to explore the concept of recognition and realisation rules in Bernstein's framework. In this study I have used a case study approach to describe the comments, attitudes and actions of the participants, and the artefacts created by the participants. Propositional statements are then derived from this data and used to answer the final research question,

- What are the similarities and differences between the units and what are their places within the curriculum of the school?

These understandings of the research questions form the basis of my theoretical perspective.

### ***Bernstein's Framework***

Bernstein's framework features in this study because it offers a structured way of defining aspects of the school culture which could influence the development of an integrative approach to curriculum development. It was decided that an exploration of the use of the framework could be a valuable exercise hence the first three research questions concerned the main characteristics of this framework, developed in chapter two. The final research question aimed to make use of the analysis of the data using Bernstein's framework by extending the ideas to the shaping of the curriculum within the school.

Bernstein's voice is strongly represented in the final analysis and propositional statements. It would be possible to answer the final research question without the use of Bernstein's framework, which may provide very different interpretations to those reached when using the framework. However, it was decided to use the framework for the unique insight it could give into the school culture the development of the curriculum.

## **Methodology**

### ***Embedded Case Study***

The research is a qualitative case study. Merriam (1998) describes a qualitative case study as "an intensive, holistic description and analysis of a single unit or bounded system" (p. 12) and, in education, "is often framed with the concepts, models, and theories from anthropology, history, sociology, psychology, and educational psychology" (p.19). This study drew on Bernstein's (2000) theory of a pedagogic code as a framework, and concentrated on presenting as holistic a description of the school system studied using techniques such as writing (Richardson, 2000) and narrative. Stake (2000) describes a case study as being organised around a small number of research questions and telling its own story. This study paints its own picture of the research questions, standing alone with no claim towards generalisability.

Rather than being a single or multiple case study, this study takes the form of an "embedded case study" (Yin, 1989). In this type of case, the study may be about a single unit (school in this study) but there are sub-units that are defined and studied within this overarching unit.

In this study, the overarching unit of the case study is the school culture. Within this unit two sub units were studied. The close observation of an integrated unit of study provided the data for one sub unit. The Integrated Forensic Science unit was considered by the teachers to be different from the traditional method of teaching in this school. The more traditional approach to teaching was represented by a science discipline-based sub unit entitled "Above Our Heads". Each of these sub units were analysed and positioned within the culture of the school, using Bernstein's framework to provide the categories for the analysis of the collected data. It was intended that the use of Bernstein's framework would yield insights about the development of the integrated unit within the overall school culture by guiding the data analysis stages. The framework had not been well developed at the initial stage of data collection.

Kenny and Grotelueschen (cited by Merriam, 1998) suggest that a "case study can be supported as the common language approach to evaluation" (p. 39). This approach ensures that the research is available to a wider audience not familiar with the

research terminology. I hope that this thesis can be read by a larger audience who can make sense of a complex situation and framework because of the efforts to present the data in accessible language. Yin (1989) believes that "... case studies have a distinctive place in evaluation research. ... The most important is to explain the causal links in real-life interventions that are too complex for the survey or experimental strategies" (p. 25). This study draws on the causal links in real-life, making use of the methods of case studies to present complex social issues, which can be used to substantiate future survey or experimental strategies.

## **Ethical Considerations**

When submitting the candidacy proposal for this project it was a requirement to complete a form regarding the ethical concerns. Although the URL has changed since I first accessed it, the documents are similar (Curtin University of Technology, 2003) and give suggestions regarding permission slips etc. I used these documents when designing the letter home to parents and the permission slip required (see Appendix B). It was important to me that no one was upset or made to feel anxious or discriminated against because of the research process. The request for permission to conduct the research, first through the principal and teachers involved and then from the students and their parents was necessary. After approaching the teachers and gaining support for the research informally, I made a formal request to the principal and the head of middle school (see Appendix B). The fact that I knew these teachers and my daughters had even had some of them as they passed through the middle school made the process of gaining their confidence easier, but also impressed upon me the necessity to be wary not to take liberties because of this relationship.

Once these initial courtesy calls had been made and it had been established that there was support for the research to occur, I formulated letters, in consultation with the Year 7 level co-ordinator, to go home to the parents of the students in the classes involved advising them of the research focus and making myself available to answer any questions. This letter did not require a response as the teacher felt that matters would be complicated because some students never seemed to bring in response slips and given the general nature of the observations and the protection of students with

the use of pseudonyms it was felt unnecessary for a formal response to this request (see Appendix B, “To Parents or Guardians of Students in Year 7 at The College”).

This allowed me to be present in the classroom and to write field notes and help out through participant observation, something the teacher had requested to enhance the learning process for the students. I felt no hesitation in helping out as I felt that if I was to intrude in the classroom and use it for my own research that the participants in the research needed to gain something from my presence. The teacher felt that there would be a lot to gain from having an extra person in the room. Involving myself in the teaching process complicated the observational phase of the research, as I was unable to maintain complete field notes. I compensated for this by writing reflections of the observations as soon after the experience as possible. In reality, I probably learnt a great deal more than I would have about the students had I simply sat, unobtrusively in the classroom recording observations. This familiarisation with the classroom and teacher allowed me to discuss the project with the teacher involved, and to give her feedback on the unit, as well as giving me the opportunity to check my developing ideas with the teacher, gaining some benefit akin with member checking.

The next phase of the research process required that I gain a greater insight into the students in the classroom; what they thought about the lessons, the teacher, their parents’ attitudes to themselves and school etc., in order to make sense of what was happening in the classroom and the cultural messages behind my observations. At this stage of the research process I was also deeply involved in reading the ideas of Basil Bernstein and had in mind to use it as a framework for my analysis. I realised that it would not be possible to interview all of the students in depth and so, in consultation with the teacher, selected a dozen children for this more detailed phase. As I would be interviewing young girls I needed to gain permission for the interview process from the parents. I also wished to interview the parents, as I needed to discover more about the students’ backgrounds than simply interviewing them alone would reveal and because of this needed to select students whose parents were most likely to co-operate. I wanted to gain an insight into the culture of the classroom and to interview students that would give me a balance between academically able and less able etc., and so attempted to involve students who would be representational of the class. The teacher knew the students best and for this reason I allowed myself to

be guided by her recommendations. At this stage a second note requesting permission for the interviews went home to the selected students and I waited for the replies (see Appendix B, Interview Permission). Of the twelve requests for permission that went home, eight request slips were returned in time for me to commence interviewing. The other four request slips were not returned in time for interviewing. I proceeded with the interview stage with the eight students whilst continuing to make classroom observations. I also contacted each of the parents at home and organised a mutually agreeable time for me to go to their homes and interview them. If possible I wanted to interview both parents but this only turned out viable with two of the interviews and I had to settle for interviewing the mothers. During the interviews with the parents I wanted to refrain from adding my own opinions and guiding the research to suit my own agenda. In order to remind myself of this I wrote out questions that I wanted to cover but kept the interview informal and allowed the parents to guide the questions to some extent. At the same time, parents new to the school were anxious to find out information about the school and I felt I had an obligation to report back to them about their queries without being judgmental about certain aspects of the school.

Knowing the value placed in qualitative research techniques such as member-checking to validate knowledge extrapolated from qualitative analyses, I was disconcerted by the fact that I could not go back to these parents at a later date to confirm my interpretations. These parents had indicated how busy they were and that they would not be available for follow-up interviews. In order to design member-checking into the interview process, I consciously listened carefully to what was being said and then re-iterated my own understanding of what they had just said to the parent, teacher or student for verification. The interviews were fully transcribed and on all occasions, except once with a student, my interpretations were validated. In hindsight, I feel this attempt to member check may hold greater validity than going back several weeks later, as new insights or discussions with other parents, teachers or students after the interview process may influence the participants to think differently, altering the data previously gathered.

I finally thanked each set of parents with a small box of chocolates at the end of the interview. This same courtesy was extended to the teachers who willingly gave me much of their very limited free time. One teacher in particular felt that she was not

listened to by upper management and appeared to have the best interests of her students at heart but was wary about being interviewed for fear that information volunteered would be used against her, which she had experienced in the past. This trust she had placed in the researcher in the past had been violated, a risk inherent in research in the constructivist paradigm (Guba & Lincoln, 1989) and something I determined not to consciously do. I had to sign an agreement with her not to make her accountable for things that she said in the interview process and this made me mindful to treat all teachers this way as they needed to remain in the school to work and did not deserve any unpleasantness because of personal views. I believe they picked up on this value I held as they were very forthcoming with their ideas, and suggestions and I benefited because of their frankness. The main teacher observed also benefited from the informal conversations we had about students' and others' perceptions by being able to discuss her ideas with someone who valued them.

The research process has the potential for harm but it also has the potential to create good. In my dealings with all of the participants and coming from a constructivist paradigm, I was mindful not to be critical but at the same time asking myself what I would do in the same situation. My feelings about the matter found support in Lincoln and Guba's (1989) cry for an ethic that reflected an open, collegial relationship between researcher and subjects. When teachers are pressed for time and interrupted by other processes within the school and are having to deal with students who are sick, tired, having friendship problems etc., it is often difficult for them to keep track of the educational aspect of the lesson and perform to their best ability. Often social problems were dealt with first as this then set the scene for more effective learning. As an observer it would be easy to criticise the educational aspect of the classroom without paying heed to other factors that are intrinsic to the classroom. I did not want this thesis to become a criticism of specific teachers or events but wanted to use the data to find reasons behind particular educational phenomena. In order to do this I needed the co-operation of all participants and therefore needed to value their rights in the research process ahead of my own agenda.

## Methods

A variety of data collection methods were employed. Interviews were conducted with students, their parents, teachers and other key personnel, such as, the principal and administrative staff. The interviews were semi-structured (Cohen, Manion, & Morrison, 2000) and students were identified for observation and interview after consultation with the teacher. The parents of these students were also interviewed. The interviews focused on the perceived strength of classification and framing at different levels within the school, including that of the units observed, and the recognition and realisation rules the interviewees possessed. Interviewees were asked their ideas about the power distribution within the school and how this was perceived within the curriculum. Students and teachers were asked about their role in the framing of the units. Descriptive terms such as conscientious, attentive, industrious, careful, receptive, creative and interactive were looked for and the perceived control over the selection, sequencing, pacing and criteria was also ascertained. I took prepared questions with me to the interviews, to act as a guide. These questions were never rigidly held to and interviews were generally relaxed and informal (see Appendices C, D, E, F and G).

I worked in the classroom as a participant observer (Punch, 1998) with a particular focus on the teacher and approximately four students in each classroom, looking for ways that classification and framing operated to form the curriculum. At least one lesson of each unit was selected for more detailed observation from the beginning, middle and end of the units. I audiotaped groups and teachers for later analyses of the language used in an informal sense, as I did not want to involve the study too deeply in the field of sociolinguistics, which was not familiar enough to me to be of any genuine use in the time frame available. I spoke frequently with the teacher, after lessons and at lunch times, asking questions and listening to her ideas about the students and the curriculum and my study and using this information to modify or be on the look out for certain aspects of the data. This was the constructivist element coming out in the study that wanted to shape and modify the data collection on the basis of new knowledge gained during the study. I also took the opportunity to confirm my own suspicions with the teacher and to clarify my thoughts about the study with her as she had expressed the desire not to be involved in reading what I wrote due to lack of time. She believed that our discussions gave her enough

feedback to be of value to her in her future teaching, although it would have been valuable to the study to get her opinion of what I wrote. I feel I have reflected her ideas as accurately as I could by reiterating important pieces of information she gave to me back to her in order to make sure I had not misinterpreted what she had said.

In addition to collecting field notes for the two units under observation, artefacts such as assessment reports, peer and self-evaluation reports, work samples and key school curriculum policy documents were collected for subsequent analysis.

All of the interviews were transcribed and transferred into the Nvivo software, which acted to expedite the analysis and coding of this data and assisted in incorporating direct quotes into the descriptive chapters (see Appendices H and I for examples of the reports created by Nvivo). The transcription and coding were done while the framework was still in its developmental stage.

The multiple data collection approach serves to increase the reliability of the information gathered by providing multiple perspectives. Since commencing this PhD, two of my daughters have progressed through the school and moved on to university with the youngest now in Year 7. I had conducted a pilot study working with the teachers involved in the main study and worked as a relief teacher within the middle school. As a consequence I was familiar with the school and the teachers involved. Janesick (2000) suggests that by “staying in a setting over time” it is possible to utilize the method of ‘crystallisation’ whereby I may “view the approaching work in the study through various facets to deepen understanding of what is going on in the study” (p. 395).

Writing was used as a method of inquiry (Richardson, 2000) whereby I was able to generate the data from different perspectives and become better acquainted with myself as the researcher. This method made use of all of the sources of data accumulated over the data collection period. Bernstein’s framework (refer to Chapter Two) was used as a guide at this phase, to ensure that sufficient areas of concern were reported on to be of use in the more detailed analysis of each case. I choose to use the metaphor of crystallisation because I am able to present the many facets, shapes and perspectives seen through a crystal, which will provide me with “a deepened, complex, thoroughly partial, understanding of the topic” (Richardson, 2000, p. 934). The resulting descriptions of the embedded cases (refer to Chapters

Four, Six and Seven) provide readers with sufficient background to be able to create their own links with the study and provide them with the knowledge that there is always more to know. These chapters acted as a conduit in the analysis phase, drawing together the data to allow more detailed analysis of the observations to occur. I choose to equate these chapters with the first phase of re-storying where a primary narrative or research text is generated, as suggested by Mulholland and Wallace (2003) in a paper where they elaborate on the phases of restorying that can result in deepening the “knowledge claims made in qualitative inquiry” (p. 6). These chapters can be considered as representative from the experiences of the field and are created from a reconstruction of field notes, reflections, observations, interviews etc. From these descriptive chapters arose the analysis (refer to Chapters Five and Eight) in terms of Bernstein’s framework (refer to Chapter Two), which subtly guided the research at each stage. These two analysis chapters can be equated with a subsequent phase of restorying where the researcher is further removed from the field experience and incorporates interpretation into the writings. Fewer direct quotes appear and although still present, the voice of the participants has been diluted by this interpretation, which arose from my engagement with the text of the descriptive chapters, Bernstein’s framework and discussions with my colleagues. The final phase of analysis (refer to Chapter Nine) was even further removed from the field experiences and the voices of the participants further muffled. Bernstein’s framework, which had been used to analyse the original data in Chapters Five and Eight was used in a much more general sense in this final analysis to draw propositional statements about the case study.

### ***Ethics of the Research Methodology***

The research methodology chosen has limitations in that the framework used has the potential to direct the analysis, emphasising Bernstein’s voice over others. Given that the research is operating within the parameters of constructivism, which implies that no singular view is of greater or lesser importance than another, this approach can be justified in that it is presenting “yet another opinion”, equally valid with any other.

Using Bernstein’s framework ensures that the research covers a broad spectrum of situations at, what could be perceived as, a relatively superficial level. Although possible to delve deeper into individual instances with further research and other

means of data analysis, it was decided to use the framework to investigate as many categories of the school culture and curriculum development as possible. This insured a broad, holistic view, which may be used to provide a basis for further studies. This broad view allowed close discussion with and feedback to teachers regarding a spectrum of categories concerning individual students and the integrated curriculum. This contact with teachers provided an array of possible areas for the teachers' further attention, involving both students and the adaptation of the integrated curriculum within the school culture.

### ***Data Collection***

I went into the school as a researcher with a great deal of background. This background could easily be seen as contributing bias to the research but could equally be seen as providing a platform from which I could comfortably socialise myself into the school community. I could relate to most of the participants in a manner which would allow me to collect data from the perspective of an outsider looking in and yet at the same time being accepted as a part of the school community.

Within this school community I already had several roles. Firstly, I am a mother of three children who have all attended the school so am well known to groups of parents and teachers as a parent. This gives me some authority because, being a private school, the parents' views and actions determine the success or otherwise of the school. I am also an involved parent and have been to support group meetings and volunteered time and effort to groups as diverse as rowing and music. My children are successful students and I am seen as instrumental in their success.

Secondly, I have worked within the school performing a relief-teaching role and have been appreciated for my contribution towards the education of the students as a teacher in the school. This allows me to move within the school grounds and be seen as a normal member of the school community, as a teacher. It has ensured my acceptance into the staff room and staff members are less likely to see me as an outsider with conflicting roles. Students also see me as a teacher and approach me that way, which could mean that they may hold back on some issues but they also see me as the mother of their sisters' friends and are more likely to be as honest with me.

Thirdly, the principal has known my husband and me for several years, both through our children's endeavours and through our own involvement on support group committees and in the classroom. My husband is a member of the Parents and Friends Committee and is well known at the school within this forum. The principal has always spoken with us in a friendly manner and knows our children well. Obviously he sees me as a parent and would be guarded with his words and the information he divulged but this would be a consideration to whomever he spoke. My obvious links with the school at a number of levels has served to make me more aware of my own perceptions and convictions and opened my eyes more to other people's viewpoint. While interviewing parents I found I was reacting as a parent and the interview became a discussion between two parents. For this reason I had to remind myself not to get too involved in the discussion as a parent as it might have influenced the information gathered, but parents did open up to me and the interviews were more on the level of informal discussions varying in length dependant on how much the parents wanted to say and the time available. Because of my situation I was aware that I did not want to direct the interview in the direction that would fulfil my own agenda but try to understand the perspective of this other parent who may be affected by events at the school differently to myself.

All interviews were recorded on a small cassette recorder and subsequently transcribed. I bought a separate microphone as this yielded the best voice reproduction and reduced the difficulty in later identifying words. I did my own transcriptions believing that it gave me the most accurate record of the interviews, as I was able to record facial expressions etc. within the transcriptions if it seemed relevant. I chose not to selectively transcribe the data, as I did not know what might be of use later during the analysis phase. This meant that it took a lot longer than anticipated but I was able to immerse myself better within the data. Several teaching lessons were also tape-recorded. I did attempt to record groups of students working together but this proved difficult, as many of them were constantly aware that they were being recorded and played up to the microphone. None of the girls were self-conscious about being recorded in the interviews and I did manage to record some girls working who were keen to get the work done and forgot that the microphone was near them.

Wearing so many hats within the school community put me in the position of appreciating the socialisation of all of the participants in the research. Vidich (1972) believes that “what an observer will see will depend largely on his particular position in a network of relationships” (p. 164). As I am familiar with the school and often seen around the school in a number of capacities, teachers, staff and students accept me as a regular member of the school community. Additionally, my experiences of being a student at different stages of my life and the knowledge I have accumulated over the years of students I have taught, my friends and my children and husband, and my desire to continue learning, all combine to place me in the role of a *connoisseur* of the educational experience in which I have a special interest (Eisner, 1991).

### **Participant Observation and Observations**

A short narrative is included here to provide an insight into just how I went about conducting these participant observations and to reveal a technique that I made considerable use of throughout the data analysis phase of the project. This narrative was written some time after the actual observations and based on data collected in field notes, reflections and audio taping of the actual beginning lesson. There were occasions when I did not interact with the teacher or students but passively observed what was going on around me. The first time the girls met together to be given instructions about where to go and the structure of the integrated unit, was one such time.

#### ***My first day of data collection***

*I remember mulling it through in my mind, what would be the best thing for me to do? I didn't want to arrive late and put the teacher out or draw undue attention to myself. I had hoped to blend in given the fact that I was not an unusual sight around the school. Ms Manor had warned me that as the unit was commencing on the first day of term four, things could be a bit disruptive and that we would just have to go with the flow. She had known that the day began with an assembly so the lesson, which was the first timetabled lesson for the day, may actually start a bit late. This would depend on when assembly actually finished. Ms Manor had obviously spent some time thinking about what she would do on this first day during the holidays*

*and after my meeting with her, which had been towards the end of the holidays, at the school. From 8:35 to 8:40 a.m. she spent her time visiting each of the six, Year 7 form classes, as intended. Where she had organised with me that she would tell the girls they were to come straight from the assembly to the Middle School Learning Centre, where they would be told what exciting thing was going to happen in their class time for the first two weeks of term four, she actually asked them to come for their period five lesson because there would not be time after the assembly. As a consequence, I arrived at the school while everyone was at assembly and waited in the Middle School Learning Centre for the girls to arrive. After 20 minutes of waiting I decided that they probably weren't coming and left to find Ms Manor and confirm the lesson for 1:45 that afternoon. Ms Manor was difficult to find and obviously extremely busy and as I did not want to bother her unduly when she was having to juggle last minute alterations I said I would see her that afternoon and left.*

*I knew that the girls already had some idea about the integrated unit as there had been discussions in their subject lessons at the end of term three as they learnt about techniques that they would be using in the integrated unit. This applied to their science, English, mathematics and Society and the Environment subjects.*

*That afternoon, I arrived fifteen minutes early for the commencement of the lesson and waited in the Middle School Learning Centre for everyone to arrive. As it was lunchtime students and teachers were drifting in and out, eating their lunch and attending to other matters. I looked around, hoping to get an idea as to how Ms Manor would have the space arranged and where would be the most appropriate position to place myself. She had a whiteboard at one end of the space and a data projector already set up so I assumed the opposite end would be the back and positioned myself where I hoped I would not be in the way. Students began to drift in, not taking any notice of me, as they were used to seeing visitors in their lessons. Some girls known to me from other classes came up to say hello as they passed through the Centre to their classrooms. Eventually Ms Manor arrived, and most girls and the other three teachers of the integrated unit were present, so Ms Manor commenced.*

*For all of the time she spent talking to the girls I stayed, quietly, at the back of the room and recorded what was said on my tape recorder. In addition, I looked around and tried to ascertain what the girls were doing while Ms Manor was talking and wrote notes about this in my field journal. I also noted what the other teachers, who were sitting up the back on the tables with me, were doing. As I knew all of them, some better than others, there was no feeling of awkwardness and they immediately accepted me as one of them and showed interest in what I was doing.*

### *Subsequent Lessons*

*This set the tone for the rest of my time in the school and regardless of where the lessons were being held, I would arrive before the commencement time of the lesson and enter the room, positioning myself at the back of the room so as not to disrupt the normal procedure. For most of the integrated unit, this proved difficult, as there was no true back of the classroom and often I would position myself off to one side of the teacher because students were working all throughout the space. In the science laboratory, which was the usual classroom for the science lessons, I would sit at the back of the classroom and wait for the students to arrive.*

*There were few occasions where I felt it best to observe without interaction. This was mainly when the teacher was busy instructing and it lasted for the entire lesson. Then I would be content to sit at the back and record notes in my journal and also audio-record the teacher's instructions or a group of students as they worked independently on a problem. The teacher had specifically asked me to help out where I could, as she was most concerned that the students have the advantage of another teacher in the classroom and I had taken relief classes of the science component of this integrated unit in the previous year.*

*Mostly, I would listen to the teacher's instructions, writing my notes, and then move around the classroom. I would stop and speak to groups of students and question them about what they were doing, causing them to reflect on the process and perhaps refine their ideas. I would then try to write notes on the discussion and ideas generated into my journal, which proved*

*difficult, as there never seemed to be enough time. Additionally, there were times when there were far too many hands raised by students requiring clarification and, at the teacher's request, I would at these times move to students and help them with their queries. All the time I would be mindful of the type of question and what it indicated to me about the lesson and when able would return to my journal to make a quick note about the issue for further thought that night when I was free to write a reflection of the day's proceedings.*

*My reflections of the lesson were difficult to accomplish for the integrated unit because often the students would be in lessons for five out of six periods in the day and I would have had little time to record, in detail, some of my observations. At these times I would remain in the classroom when the students had gone to recess and lunchtime trying to elaborate on issues as they arose and before they escaped from my memory. It was times like these where the audio recordings proved of most use. Field notes consisted of hurriedly scrawled notes about what someone said or an attitude that was displayed or sketches of where students and the teacher were positioned in the classroom or diagrams indicating the way something had been written up on the whiteboard. When the opportunity arose, such as at the end of the day or during lunchtime, I would write in my field notes journal a reflection of what had occurred elaborating on gestures, perceived intonations, etc., to add greater depth to the data collection.*

## **The Interview Process**

I knew that I wanted to interview students about their lessons and what it was they thought they were doing and why. The case study approach and research questions meant that I needed to know what they felt. I hoped I would be able to link what they said with their behaviour in class. Questions about their environment, culture and social concerns were all required to help situate the research within the culture of the school and to understand what this school culture was really like. Bernstein's framework was used as a basis for formulating questions (see Appendices C, D, E, F and G) that were used to guide the interview process which was semi-structured (Cohen et al., 2000) for the principal, teachers, students and parents alike.

I had no intention of sticking rigidly to the questions I had written and intended to use them as a guide to help ensure that I would get responses in sufficient areas to be able to analyse the data in terms of Bernstein's framework. Certain areas of this framework required me to be alert to the use of certain descriptive words about the school environment. To ensure that I had something to work with I asked interviewees to provide descriptive words that would describe, for example, the principal. Particularly in the interview with the principal, I was unable to keep to the order of the questions I had written (see Appendix C) and I allowed him to speak as much as possible, guiding him when needed, to ensure that I had covered all areas I required to be able to work with the framework. I adopted this casual approach to the interview hoping to obtain data about a wide variety of aspects pertinent to the school that I might not have initially considered. Reluctant to put words in the mouths of subjects I attempted to adhere to the most common forms of non-directive probes for interviewing (Brenner, Brown, & Canter, 1985). The probes used were; Anything else? Can you think of any other reason? Can you tell me more about it? In what way? Can you explain this a little more? Can you be more specific about this? Why do you feel that way? Can you tell me more about your thinking on that? Why is this? and Are there any other issues involved? Keeping these probes in mind helped me to refrain from guiding the questioning and answers to fit my own expectations.

If I were doubtful about the meaning of something that was said, I would reiterate it back to the person in my words, looking for confirmation or denial and an alternative explanation. Usually my interpretation was agreed with but occasionally it revealed misunderstandings that the interviewee then had the opportunity to clarify. This was one tactic I used to enhance the reliability of the data, as member checking (Punch, 1998) at a later date could not easily be achieved with all participants.

I wanted to be able to make sense of my data by linking it to classification and framing and attempting to decide if the students possessed recognition and realisation rules either consciously or sub-consciously. I believed that the use of Bernstein's framework would give me some sense of how the curriculum was working within this particular school environment. I had thought of selecting students randomly but after discussion with their teacher it was decided that she would suggest the students I would approach to give a spread of abilities and personalities. This is known as

maximum variation sampling and provides the broadest base for collecting data resulting in a wide understanding and is most commonly used in studies based on a constructivist paradigm (Guba & Lincoln, 1989). The teacher was best able to ascertain the spread of abilities and I trusted her to guide me in this matter. She also was aware of those parents who were most likely to cooperate. This was a point of great concern for without cooperation my data collection was limited and I would be left making assumptions about the perceived lack of involvement. This is commonly referred to as purposive sampling and is commonly used in qualitative research (Cohen et al., 2000; Punch, 1998).

Students were withdrawn from the classroom and interviewed in an allocated place at the suggestion of the teacher. She agreed that they could take part in the interview during their class time. They were allowed to take a friend with them for moral support but I discouraged the friend from influencing their answers by jumping in with their own thoughts. Parents were interviewed at their convenience in their own homes. Teachers and the principal were interviewed during breaks in their day or before or after school, in private.

### **Collection of Artefacts**

To augment the interview and observation data I collected numerous artefacts that I could use during the analysis phase of the project to shed light on alternative perspectives. Collecting artefacts proved to be a difficult feat. No matter how often I would request the teacher to allow me access to reports or tests etc., in her haste she would often return them to students early and then it would be almost impossible to retrieve them from students as they were invariably “lost” or “at home”. I did manage, after some persistent effort to collect artefacts that proved to be of considerable value in the analysis phase. I managed to collect most of the students’ Self-Reflection Sheets (see Appendices J, K and L for examples), copies of the instructions and the story used in writing the trial that were placed on the school intranet for student use to guide them through various aspects of the integrated forensic science unit (see Appendix M for an example of one set of instructions), a copy of the questions that the girl responsible for the role of crown prosecutor in the integrated unit wrote (Appendix N), a copy of the instruction book for the unit *Above Our Heads* (see Appendix O for the first few pages) copies of some students’

portfolios, which contained reports they had written for the science unit, Above Our Heads (see Appendix P for a copy of one such report) and copies of a few of the girls' tests in the forensic science work, which was part of the previous science subject.

### ***Self-Reflection Sheets (see Appendices J, K and L for examples)***

In the previous year the teacher had given the students a reflection sheet with various questions about their feelings on the integrated unit, to be completed in pen or pencil and submitted. Ms Manor, the teacher conducting the classes that were to be observed, was interested to find out what motivated the students for her own benefit. I requested that I be given a copy of their answers as part of my data collection if it was going to be given again and the teacher agreed. As there had been problems with collecting these sheets the previous year, Ms Manor made certain that all teachers knew that I wanted the sheets as part of my data and asked that the girls name them and returned them. I felt that she believed they would be more likely to cooperate if they knew it was for my benefit (Reflections in Field Notes dated 23-10-01, Tuesday). As it turned out, I had all of the sheets returned to me from the three classes I was not observing but only half of Ms Manor's class completed and returned the sheets. I did not want to cause too many changes in what the teacher planned and so was content to collect the sheets that the teacher had organised without adding questions that would particularly help with my analysis. The questions were of a general enough nature to be of benefit to my study.

However, the teacher the day before getting the students to complete these sheets decided to ask me if I wanted to write any of the questions. I quickly thought of some questions to be included and gave them to the teacher to be printed. As a consequence, the questions were not as well structured as I would have liked, and this emphasises the need to be ready at all times for unexpected opportunities that may arise during data collection. It is not possible to go in with a fixed agenda and not be flexible about matters concerning the research.

### ***Making sense of the data***

Once the data had been collected I needed to start making sense of it. The interviews needed to be transcribed and I chose to do this myself even though it took a lot of time because as I transcribed I became more familiar with the data and better able to

start analysing it. The process also reassured me that I had not missed anything of possible significance.

## **Transcription and Coding**

I made considerable use of the NVivo (QSR International, 1988-2002) software and found it invaluable for keeping track of the paper trail that became longer and longer as I got deeper into the analysis. The transcriptions of the interviews and any narratives I wrote about the data were converted from Word documents into Rich Text Format to enable them to be imported into the NVivo tool for analysis. I initially went through the interviews and coded them using the free node facility, which helped me to begin thinking in terms of Bernstein's framework. The software was used to generate Document Text Reports and Node Reports (see Appendices H and I for examples of these reports). These reports proved extremely useful during analysis and in the writing up phase as quotes could be directly copied from these documents on the computer, keeping the paragraph markers that were generated with the reports and thereby maintaining a consistent paper trail. This ability proved invaluable when linking ideas and concepts developed through the analysis phase. Direct quotes can therefore be seen throughout the thesis beginning with a number followed by a colon, which corresponds to the paragraph marker that was given to the paragraph by NVivo, and at the end of the quote the name of the interview in brackets. I did not abbreviate or assign a code to the data as I felt that it would be beneficial to know immediately where the data came from rather than needing to look up a key for this purpose. The following is an example of a quote used in Chapter Five from the principal. It came from the Interview with the Principal dated 11-10-01 and was paragraph 79 of this interview.

79: Principal: I think in a school like this you can take risks to maybe experiment because I don't think you'd be doing any harm to those students' development. I think maybe the way we've been doing it has been doing some harm. (Interview with the Principal, 11-10-01)

Where there is no number at the beginning of the quote the quote was taken from Field Notes or other artefacts and was not entered into NVivo. This is indicated at the end of the quote by the actual location within the other sources of data in brackets.

On occasion, reference has been made to paragraphs within interviews inserting brief, actual quotations. The paper trail has been maintained in these instances by inserting the paragraph marker immediately after the quotation in brackets within the writing.

To maintain confidentiality, pseudonyms have been given to all participants. Parents are referred to by surnames and where their daughters were also interviewed the daughters have been referred to by a Christian and surname to show which parent the student was linked to.

### **Writing as a Method of Inquiry**

Writing as a method of inquiry began when I started entering my observations into the journal I had set aside for this purpose. These notes were as explicit as possible, including sketches of where students were seated or classroom layouts and where the laboratory equipment was kept. This factual, concrete representation of every detail I could record is referred to by Richardson (2000) as “observation notes” (p. 941). Within these field notes I would make notes to myself about a particular point it had occurred to me to ask of the teacher or about questions that would be useful to include in the interviews I was planning on recording. These notes were usually jotted in the margin of my field notes as they occurred to me and assisted in bringing the entire research process together. Richardson refers to these types of notes as “methodological notes”. At the end of each day I would record a self reflection of the day’s events including “personal notes” such as how I felt when I made the observation or what I thought was happening in the mind of the participants over a particular issue and any “theoretical notes” that occurred to me. These notes were of use when I later wrote about my experiences in a descriptive way, incorporating quotes as much as possible to retain the voice of the participants. They also proved of value when I was planning the types of questions I needed to ask during interviews if I was to collect data that would be useful within Bernstein’s framework.

As I re-read the field notes, interviews and other data, I began to build up in my mind a picture of the classroom and the subtleties of the social context. In order to explore these developing ideas I wrote about the experiences incorporating field notes, observations, interview data and the reflections I had written each day I had completed my observations. I often also included my own thoughts as I wrote about

what it all might mean. The writings were mostly descriptive and were used to re-create the research experience and bring to focus ideas about the observations and Bernstein's framework. The act of writing became an important research tool for me as it helped to clarify ideas and develop multiple perspectives, as I attempted to put myself into the place of each of the participants. In this way writing became not only a device by which I could communicate my ideas but a method of exploring the data and coming to a point of "knowing" (Richardson, 2000, p. 923).

### **Data Displays**

Data were initially analysed using the technique of writing, as discussed in the previous section. Bernstein's framework provided the direction for this method of inquiry and, as a consequence, introduced Bernstein's voice to the analysis. The framework was used to construct "displays" of the data.

Displays of the analysis can be viewed in Tables 1 and 2 where the results of the inquiry process crystallised into the summaries of classification and framing values found in these tables. The use of "data displays" is found in Miles and Huberman (1994) where they are recommended as a way to analyse qualitative data and to reduce bias:

Analysis of qualitative data rests very centrally on displays that compress and order data to permit drawing coherent conclusions, while guarding against the overload and potential for bias that appears when we try to analyze extended, unreduced text. (p. 141)

Part of the focus of this research was to investigate the use of Bernstein's framework and hence the data were analysed according to the categories found in this framework (see chapter 2), which might be interpreted as presenting a biased view. The displays produced were aimed at presenting the data within the framework used. Figure 5 is a display that resulted from the initial analysis and production of Tables 1 and 2. It is seen as a way to pictorially represent the data to enable the development of propositional statements.

### **Crystallisation**

Imagine a crystal, with its many facets reflecting the light, each surface unique with its own footprint coming together to form a crystal of great beauty. Each surface can

be made sense of in its own right but together they form something all together different. This is what I am trying to do when acting as a bricoleur. I am taking the data generated by my study and immersing myself in this data, utilising writing as one tool for deeper analyses. With a heightened sense of the data due to this process I then try to piece it together to form a crystal of meaning with its own identity (Richardson, 2000).

The extended time in the field getting to know the participants and workings of the school, the variety of data collection methods and the utilization of writing to act as a means of further inquiry and analysis provide a variety of ways of developing ideas from the data with multiple perspectives. These multiple perspectives were woven together resulting in the development of propositional statements about the case study and implications for beyond the study. In this sense the research fits the criteria of working as a bricoleur and utilises the concept of crystallisation as an analytic tool (Miller & Crabtree, 1994).

## **Conclusion**

The research has been conducted from the perspective of social constructivism and utilised a framework based on the social constructionist ideas of Vygotsky. The methodology of an embedded case study approach was adopted because of my own theoretical perspective, which was informed by these epistemologies. This methodology fitted the research questions well and certain methods were then called for in order to collect the type of data required to analyse the situation in the constructivist vein. In particular, participant observation with the writing of field notes and casual, semi-structured interviews, selecting participants based on maximum variation sampling were used. Other artefacts were collected for use during the analysis stage. The use of the framework helped to guide the collection of data and the early analysis phases, where use was made of writing as a method of inquiry to help view the data from multiple perspectives and to set the scene for readers so that they themselves could identify with the data.

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## **Chapter Four: Background to the School**

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### **Introduction**

In this chapter are detailed accounts of the physical attributes of the school and the opinions of the principal, teachers and parents that provided the background to the school culture. It is divided into two main sections.

In the first section a general overview of the school is given followed by an in depth description of the principal's views on education. This is included here as the principal is the chief executive officer of the three schools that exist within the college.

In the second section, entitled the middle school, can be found a description of the physical attributes of the middle school where the research was situated; the building, class sizes, timetable and administrative structure followed by in depth consideration of both teachers' and parents' views towards the school.

### **Overview**

The school is a church run, large private girls' day and boarding school divided up into three campuses, the junior, middle and senior schools. There is an expansive pastoral care program throughout the entire school with an emphasis not only on subject selection and career choices but provision for spiritual guidance, the development of a responsible and caring attitude towards the global community and the development of sound moral and ethical values.

The junior school has an Early Childhood Programme and approximately 270 students ranging from kindy to Year 6. The students have specialist music, art,

drama, languages other than English (LOTE), physical education, information technology, literacy and numeracy teachers and there is a laptop programme whereby all Year 5 and 6 students are required to possess their own laptop which is used on a daily basis in most lessons. There is a strong hierarchical order throughout the Junior School, which is overseen by the head and deputy head of junior school. The curriculum is designed so that girls study “all eight key learning areas as outlined in the Curriculum Framework document” (junior school, Curriculum document). There is also provision of a range of co-curricular activities, which are intended to broaden the educational potential available to girls in Years 4 to 6.

The middle school was designed to “provide students in Years 7, 8 and 9 with a unique educational experience tailored to the specific requirements of this age group” (middle school, Aims document, not referenced to protect anonymity). The purpose built space caters for approximately 400 students who also have access to science laboratories, food and textile laboratories, art studios, a performing arts centre, a purpose built gymnasium, sporting complex and swimming pool and library all housed within the senior school. Many girls avail themselves of the large variety of co-curricular activities available, ranging from music and the arts through to debating, chess, many types of sport and environmental and community concerns.

Senior school is well equipped and offers a broad academic programme complimented by a large and varied range of co-curricular activities that the girls have access to.

Although girls are encouraged in their academic pursuits there is also strong emphasis in providing a balanced educational programme, which will equip them to “live and work confidently, wisely and effectively in a complex and changing world” (Mission and Aims document).

### ***The Principal***

In an interview early in the study with the principal, Mr Suit, he highlighted five key issues, which are pertinent in terms of defining the grammar or culture of the school. These issues were the role of education, schools and society, outcomes-based education, the importance of staff and the role of the external public examination.

Under the first issue, the principal gave his general views on the role of education. During the course of the interview it became clear that his own schooling was

important in formulating his views of what he considered to be a well-rounded education. He was primary trained but after graduation taught Years 7 and 8 and “developed courses (himself) that were of an integrated nature” (63) because that is what he saw going on in life around him. In his role as principal he endeavours to provide “a smorgasbord of opportunities” (23) for the students to equip them with real life skills. He understands this to mean that it is necessary for the school to encourage students to partake of a wide variety of co-curricular activities and academic pursuits to enable them to discover their strengths and weaknesses and to develop the flexibility needed for today’s society. He sees this “smorgasbord of opportunities” (23) as an attempt to provide an element of integration whereby many different perspectives may be brought to bear on the ultimate development of the student. By his own admission, primary training tends to support the notion of integration and this could explain why he is excited by the move towards interdisciplinary or inter-faculty teams of teachers throughout the middle school. In his efforts at describing an ideal curriculum he used the words; holistic, liberal, well rounded, student-centred and integrated quite frequently and saw the co-curricular opportunities the school provided as being vital aspects to the complete education of the student. The principal’s desire for an educational balance in the curriculum was expressed in his own words:

21: Principal: It’s very much student centred. ... I want the students to go away from school knowing that they are learning something that they’re engaged in rather than it being something that’s done to them once they’ve set foot into the school. Technology has to be an integral part of that whole curriculum process ... to me it can’t be technology added on to, it’s got to be woven into the whole curriculum planning.

23: Principal: Holistic I also would view as part of, and that’s why we call it now not extra-curricula, we call it co-curricula, is that it’s an important part in my view of the curriculum. The music in terms of bands, orchestras, choirs, the sports that they do, the drama, the dancing, debating, public speaking, art club, music club, save the earth club all those sort of things, that’s part of the holistic. So that’s enabling the children to use whatever their talents ... we hopefully create a smorgasbord of opportunity so that they can use those talents. (Interview with the Principal, 11-10-2001)

It was, however, quite obvious that he strongly values the eight key learning areas as outlined in the Western Australian Curriculum Framework document. This document indicates that there is still a reliance on a subject-defined curriculum, creating boundaries between subjects and thereby allocating varying degrees of power to each of these areas. The principal, as illustrated by the following quote, often referred to the school's emphasis on discipline-based subjects:

23: Principal: Holistic would be the curriculum aspect that you're giving students the opportunity for a liberal education from that point of view, that there's a balance across all subject areas and they get exposed to all the eight learning areas. (Interview with the Principal, 11-10-2001)

The second issue to emerge from the interview was the principal's view about schools and society. His belief that, "schools in a way reflect society" (143) appeared to have a bearing on how much importance he placed on the development of values and ethics throughout the culture of the school and the school's emphasis on pastoral care. He spoke of values in two senses. The first was in a very broad sense, such as the provision of a library because society and the school values reading. The second pertained to the Christian faith and the need to impart the importance of moral principles for the students. He hoped "that schools like this, in terms of values are going to be benchmarks" (143) for society. His concern about where society was heading and the fact that schools often reflect this was motivation for his conviction that moral principles needed to be embedded not only across the curriculum, as mandated by the curriculum framework, but throughout the entire life of the school. This moved him to employ a director of ethics and pastoral care whose responsibility is to help with embedding values across all aspects of school life; form-time, class-time, in the science curriculum, mathematics curriculum, on camps, through worship in Chapel etc. He felt that a religious minister with a very good educational background would provide the insight required and initiated a four year programme to see the vision through.

He summed up the type of education he hoped to provide for the girls at the school in the following way:

39: Principal: Girls that leave this school have a good well-rounded education, a holistic education that we've prepared them for the next step in their journey in life but that they take their own road, I wouldn't want them to all take the same pathway after school. ... I like to think that we gave the girls for the, particularly because it's a girls' school, is that we develop qualities such as assertiveness, not aggressiveness, confidence, self-esteem, those sort of values because, there's still not equity out there in the work force and so part of our responsibility lies in creating young women that are ready to give it their best shot. (Interview with the Principal, 11-10-2001)

His zeal and personal goal for the school was not always hindered by the opinions of the parents who send their children to the school. Although willing to listen to and survey parents, he believed that parents could find out what the school stands for and make their own decision to send their children there or not. In his opinion, parents were not always up to date with trends in education and he believed that important decisions about education should be left to the people for whom education is their profession. He felt that most parents were happy to do this and it was part of his role to deal with problems as they arose.

121: Principal: There would be those (parents) that might have experience and knowledge, ... that's where I talk about the partnership they can be having with their daughter but it's more encouraging and supportive rather than sitting down with them with their maths. There's no way probably they can help them with their maths from what they did at school. ... There always will be those who say well look, you should be doing this language and not that but very few would question sort of the maths or the English. I think they see that they are paying big dollars to hopefully rely on us as the professionals to get the job right. But I again want it to be clear we're not just burying our heads in the sand and thinking we're OK, I'm all right Jack, doing what we think is best. I think we have to be receptive to feedback from parents. Part of the questionnaire that we do, or survey, helps with that um .. gives them the chance to talk about those sort of issues. (Interview with the Principal, 11-10-2001)

The third issue arising from the interview was the principal's commitment to outcomes-based education. The knowledge that it was a Western Australian state mandatory component of education to be complied with by the year 2004 caused him to begin its implementation within the school in a timely fashion. He did not wish to be caught out when he was required to "sign off" (165) about the degree to which it was complied with in the school and expressed the opinion that a school such as this would be "well ahead of any benchmarks" (165) that might be set. The school was grappling with the ideas, in particular, of how to report in terms of outcomes. Part of the school's responsibility, in the principal's view, was to educate the parents with regard to outcomes-based education, which tended to confuse and frustrate many parents who grew up with the system of A, B, C, etc or a percentage mark and ranking. The teachers were grappling with the problem of how to present the assessment to parents and were having difficulty in achieving uniformity between departments. At this time the principal felt that it was best to supply parents with a mixture of styles to assist them to make the transition to a fully outcomes-based style of reporting. The staff had experienced an increase in workload due to the need to comply with outcomes-based education guidelines. The principal's preference for this style of teaching and reporting was apparent when he expressed the view that the old idea of pass and fail was outdated and that students need no longer fear failure because they would achieve at whatever level they happened to be working at. An outcomes-based education also opened up the possibility of students progressing at their own pace. This can be linked with the principal's vision for the future for middle school. He spoke of a middle school where there were no longer year levels but students of all ages working at their own level.

81: Principal: I think where we're heading in a phases development model is partly overcoming (the problems associated with an outcomes-based curriculum) that. You know blocking say sevens to nines. Maybe five years down the track we won't call them sevens, eights and nines, they'll just be middle school students doing what is matched at their level. Wouldn't that be exciting? (Interview with the Principal, 11-10-2001)

The fourth major issue that the principal saw as critical to the running of the classroom was the importance of staff. He tried to select his staff, using the interview

process, to reflect his own liberal views of education and desired his teachers to have “humanity, humility, self-esteem, confidence ... (and to be) innovative, risk takers” (103) belonging to the community of the school and providing a good role model for the students. He saw the majority of his staff as having “a generosity of spirit to go that extra mile” (111). Middle school staff, in particular, needed to believe in a truly learner-centred style of teaching where consideration was given to the belief that learning was something that the students were involved in and not something that teachers did to them. He used the metaphor of “a journey together” (29) to describe the teaching and learning relationship and felt the need to “involve students in the planning” (61) of their education. His belief that teachers didn’t “have to waste any discipline time” (61), at this school, led him to believe that they could be risk takers in terms of their teaching, bringing creativity to their role as teacher.

79: Principal: (In) a school like this you can take risks to maybe experiment because I don’t think you’d be um doing any harm to those students’ development. I think maybe the way we’ve been doing it has been doing some harm. (Interview with the Principal, 11-10-2001)

He was realistic, however, in his admission that not all teachers within the school would be sympathetic to his views and that he needed to work at overcoming “teacher’s, not so much resentment to it, but (their) lack of knowledge and lack of skills to do it.” (69) The need to supply a means for teachers to learn and understand more about teaching and learning drove the area of professional development and staff-members were encouraged to further develop their knowledge and skills. He described some of his staff members as still being very rigorous in believing that pre-requisite skills need to be taught before moving on to something else but conceded that his mathematics department, although giving the impression of being rigorous, was capable of adapting. The way the school was planned, in terms of the phases of development of the child, meant that many staff needed to be sympathetic with the additional demands of teaching within a middle school environment.

In middle school the year levels were organised around teaching teams requiring staff to work together collaboratively and cooperatively allowing for the possibility of various styles of integration to occur. Teachers were allocated two meeting periods per six-day cycle in which they could discuss anything of concern whether it

was curriculum based or to do with pastoral care and values. The school was based on an hierarchical managerial system where with a middle management whose responsibility was to encourage each team to work well together. The principal saw as important the ability to motivate staff, and outlined a system whereby teachers were given leadership possibilities to encourage them in their work environment. He emphasised the need to empower teachers who could be used as role models for others and the desire to use these teachers as the impetus for the rest of the staff to be more creative risk takers. He portrayed this when talking about teamwork.

111: Principal: Team-work I guess from my mention of the point of view is I'm encouraging each team to be working well so if they're working well the bigger team, the school, is working well. Now that's the responsibility of your middle managers and so you've got to rely a lot on them in terms of talking about, you know, the mass of staff that you ... the gift I guess of empowering and delegating responsibility is an important part that the staff see that they're given that chance for leadership roles within the school as well creating um ... you want to keep good staff ah ... and so you create leadership opportunities within the school so that they're extended, they're challenged in their role and hopefully they do come to school wanting to work.

(Interview with the Principal, 11-10-2001)

Fifthly, the role of the external public examination, the Tertiary Entrance Examination (TEE), emerged as a factor, which contributed towards defining the grammar of the school. The principal made it quite clear that as a school a lot of time had been spent, in particular, on the development of the middle school as a place suitable for young adolescents. He felt that the team approach in middle school was very successful and that this approach could well be extended to the senior school, particularly Year 10. He expressed the concern that the current need to prepare the students for the TEE at the end of Year 12 was a limiting factor in what could be done across these year levels. He was dubious about the senior school's ability to find the concept of teams and integration to be commensurate with the need to prepare candidates for this exam. The senior school had made moves to integrate with institutions outside of the school to enable their students to develop a sense of the world beyond the classroom but these efforts were mainly due to the energy of a

handful of staff members and confined to the social science areas of economics, accounting and business. There were TAFE Modules, the IN STEP Programme and the University Fast Track programme available for students in selected areas of study only. He felt that perhaps the objections to change were because of the teachers viewing senior school in a very regimented way due to the external exam pressures and that this could possibly change if there were some relaxation in these requirements. He hoped that his vision for middle school as being independent of year levels (see issue three above) might eventually be realised within the senior school as well.

99: Principal: We've focused a lot of energy on junior and middle school, I think we now need to focus a lot of the energy on our senior school to develop a lot of those links you know with agencies outside. Also we're developing that team approach but a lot of it is to do with the nature of the TEE structure, I think if that can be broken down to some extent so we can develop teams, I mean we can do it in Year 10 but whether staff will be as sympathetic there I don't know because they'll be saying "well look we've got to prepare them for the TEE", but it may be that we are looking more at what is currently Year 11 and 12 seen as senior school but you could be doing Year 12 as a Year 10. And some are ready to do it. (Interview with the Principal, 11-10-2001)

In summary, all five key issues highlighted; the principal's beliefs about the role of education, schools and society, outcomes-based education, the importance of staff and the external public examination system, are seen as major contributing factors to the development of the culture or grammar specific to the school in question. His claims that no difficulty is "insurmountable" (75) and his vision for the school (as outlined in issue three) form the basis for how he works with the staff he chooses and his procedures for providing motivation for his teachers. The fact that he had been principal of the school for the previous 15 years meant that many of his views were incorporated into the official policies of the school and adopted by the school council. Perhaps insight can be gained from his comment about what he would like to see in a student leaving the school for the last time.

45: Principal: ... My view is that the TEE, yes it's of value to get whatever score for the next step of your life, but those other qualities, in my view, are so much more

important. Ten to twenty years down the track how they've gone in their TEE really is not going to be of value to them. It's going to help them obviously with the next step where they go on to uni or whatever but what they do there is really up to them. How they've used their skills whether with sport or music or whatever so that they've got those skills or qualities to use in the hyper game are probably more and more value plus the values and the ethics that you develop in young people, you know, compassion, humility, confidence in themselves, they're going to be much more valuable to them later on in life. So I guess in a round about way I'm saying that (if) they're leaving with good values and good principles of life, that would suit me, you know, more than if they had just a narrow outlook and just focused on the blinkered academic view.

(Interview with the Principal, 11-10-2001)

## **The Middle School**

As my classroom observations were confined to the Year 7s, I was collecting data from that section of the school known as the middle school. Following is a brief description of the physical attributes of the middle school to set the scene for the observations and then a more in depth section outlining key issues for the teachers and parents.

### **Building**

Enter the building through double doors and you come upon the reception area on your left. Past the reception is the large space known as the middle school learning centre. This area is large and open with high ceilings, lots of windows and fluorescent lighting. Off this open space are four classrooms. Continuing on through this space for about 20 metres you come to a stairwell, which leads down to a long corridor lined with lockers and three more classrooms off this corridor with a storeroom in between. Any noise in the corridor travels upstairs and causes the learning centre to be quite noisy. The space is not often used for lessons because of the possibility of disruption but is convenient for work that does not fit the stereotype of the structure of a typical school in the current climate and provides a suitable assembling area for the year levels when needed.

## **Class Sizes**

The middle school consists of the Year levels 7, 8 and 9. Year 7 is an intake year where the number of students is doubled from the previous Year 6 from the junior school. There are four classes consisting of approximately 27 girls. Year 8 is another intake year where another two classes are added making a total of six Year 8 classes. Year 9 remains the same as Year 8.

## **Timetable**

The middle school's timetable in 2001 was rotated every six days. Sporting events and all day disruptions to the timetable were labelled as day zero so as not to interfere with the allocation of period times to each subject area. Each class was given five lessons of 50 minutes duration for science per six-day cycle and most of these lessons were before lunchtime. The science teacher, who was also the Year 7 level coordinator, took all four, Year 7 classes for science. While the science teacher was teaching so too were the English, mathematics and social science teachers. This allowed the core group of Year 7 teachers to be able to have regular meetings, twice per cycle, to discuss issues such as pastoral care, common themes in what they were teaching and to give them time to attempt to integrate their teaching. The structure of the timetable made provision for it to be collapsed from time to time to allow for units such as the Integrated Forensic Science Unit to be taught as all four, core subject teachers were available at the same time. This structure did however prevent the teachers from being able to view each other's teaching or handling of particular students.

## **Administrative Structure**

The junior school runs quite separately from middle and senior schools and reports to the principal via the head of junior school. Administrative and curriculum issues are handled differently in junior school compared to middle and senior schools because of its much smaller size, with fewer students and staff.

The middle school is governed by its own head of middle school, who is responsible for organisational matters pertaining to Years 7, 8 and 9 and is ultimately responsible to the principal of the school. Teachers helping with organisational issues meet with specific year level coordinators who then confer with the head of middle school. All

teachers have access to assistance from the guidance counsellor, career counsellor and the director of ethics and pastoral care.

Curriculum issues are dealt with through a separate system whereby heads of departments are responsible for curriculum decisions within their own department and reporting to the deputy head of middle school or deputy head of senior school. Heads of departments are normally from the senior school and may not be familiar with daily matters occurring within the middle school. The middle school has its own curriculum coordinators for each department who are responsible for curriculum issues within the middle school and report to the deputy head of middle school and the head of their department in senior school.

All major organisational matters are referred back to the principal who has the task of raising them with the school council. In an interview with the principal, when asked about his influence on the official school policy, he replied

115: Principal: I guess someone being in the school that length of time, the notion of a learner centred school, the phases of development, looking at Moore's um, focus on who we're teaching rather than what we're teaching, is an important philosophy that I've tried to impart. The values, Christian values um, practises within the school, I mean they would have been there but you know it's something that I felt that the school was ripe for me to sort of encourage that a bit more. (Interview with the Principal, 11-10-2001)

Ultimately all organisational matters need to be approved by the school council before they can be implemented but the principal has considerable influence on council decisions.

### ***The Teachers***

Four teachers were interviewed: Ms Manor (the teacher of the integrated unit and the Year 7 science teacher as well as the year level coordinator), Ms Barter (the Year 7 drama and social science teacher), Ms Felix (the Year 7 mathematics teacher) and Ms Corr (the Year 7 English teacher). During the course of the interviews with the four teachers involved in the teaching of the integrated unit it became apparent that three key issues; trust, time and a variation in the objective of education between

middle school and senior school teachers, influenced the teachers' attitudes towards teaching and the school. These issues would have a bearing on the ultimate culture of the school and the social structure of the individual classrooms.

Trust appeared as a big issue, involving the relationships of teachers with each other, the administration, the students and ultimately the whole school community. The opinion was expressed that once appointed as a teacher in the school you were largely left on your own to do what you wanted in the classroom. This was seen as a disadvantage for the novice teacher who needed feedback. Teaching became an individual act and there was never certainty that what was going on in one classroom was also happening in every other classroom. For all teachers interviewed this led to some degree of uncertainty about their competence in the classroom and made them apprehensive about how what they were doing would be viewed by senior teachers or the principal. At the same time it was also felt that there must be a large degree of trust given to them to do the right thing.

163: Ms Corr:      Actually I remember saying when I first started that I felt very uncomfortable with the way no one really knew what I was doing, not even my head of department, and a friend of mine was saying, "Well, turn that around and say they obviously trust you." At that point in my teaching career though I wanted more.

(Interview with Ms Corr 26-11-01)

Although mindful of the degree of trust afforded them by the upper management, teachers felt hesitant that they could count on them for support if needed. They certainly held much regard for their Heads of Departments but were uncertain beyond that, as a quote from one of the teachers interviewed indicates when asked directly about how much support would be given.

171: Ms Corr:      Up until a couple of months ago I would have said, "Support me." Absolutely, I wouldn't have questioned it, I have heard in the last couple of months a couple of stories from friends when that hasn't been the case, but I think I'd still say that they would support me. I know my department would and I know my head of department would. Above her, I'm not sure. (Interview with Ms Corr 26-11-01)

Another felt that her opinions would not be listened to and that they were asked for out of courtesy rather than any real value being placed on them. This led to certain feelings of resentment and caution about what may or may not be proposed within the school.

21: Ms Barter: The mechanisms of putting forward a proposal in a school of this size seem to be quite gargantuan. By the time we've heard it and the proposal's come before us, a lot of the decisions about its going ahead have been made, or certainly OK'd by people who are further up the ladder. We are really given the proposal as a courtesy thing. That's how I feel. (Interview with Ms Barter 4-12-01)

Another teacher spoke of sometimes feeling pressured because what she was trying to do in class might not been seen as worthwhile by more senior teachers and another remarked that she wished she could be more creative like some of the more senior teachers. Most teachers were too busy to think about this much but it still caused moments of apprehension and insecurity in some teachers. From an alternative perspective all teachers interviewed reflected on how professional and hard working most members of the teaching staff were and trusted each other's abilities and commitment to the job if not their motives.

117: Ms Barter: There is a real work ethic here, but I think the work ethic is actually based on fear, rather than creativeness or wanting to do better, its survival. (Interview with Ms Barter 4-12-01)

Time, or rather, lack of it was another reoccurring factor in the social development of students in the classroom. Teachers felt pressured that they would like to be more creative in the classroom but lacked the time to put much effort into the development of alternative ways of teaching or to visit each other's classrooms to be exposed to alternative methods. This lack of time also affected the amount of collaboration that could feasibly occur between teachers and restricted teacher movements in relation to each other and the planning of lessons. There were timetabled year level meetings, which largely involved aspects of pastoral care but where curriculum issues such as the Forensic Science Integrated Unit could be discussed. Due to each individual's hectic work schedule curriculum ideas were not discussed in depth and teachers were

trusted and judged to be competent. This meant that some ideas were adopted without a great deal of thought.

232: Ms Felix: Me being who I am, I went along with what Ms Manor suggested. I think I would enjoy it better if I did put more into it myself, in retrospect. (Interview with Ms Felix 26-11-01)

263: Ms Corr: I didn't put nearly as much thought into it (the Integrated Forensic Science Unit) this year as I did last year and I think I made some decisions just based on easy options. (Interview with Ms Corr 26-11-01)

Ms Felix is a mother of four boys who was self-confessedly a fairly traditional teacher and wanted to be more inventive and interesting. She had boundless energy and put the welfare of her students as her utmost priority. She often expressed feelings of inadequacy but didn't have the time to do everything she could for her students and often regretted this and worried about it.

401: Ms Felix: I would like to do more practical things to reinforce something but I feel like I probably haven't had the time to develop that or the skills to develop that. I noticed in the prac teachers they were more equipped with that.

418: Ms Felix: You've got to do the best by the kids in maths; parents see maths as a really critical subject. Even though it's the end of term I'm panicking that maybe I haven't done the best job for some kids. I worry about what I can do. (Interview with Ms Felix 26-11-01)

Ms Felix highlighted this lack of time when talking about collaboration.

257: Ms Felix: I don't think any teacher would knock you back if you said, "I'm having trouble getting this going, it's not working for my class, what are you doing?" I think they'd help you but I think it's really good to collaborate on the topic as it's progressing to see if you are all up to speed with it, or getting the most out of it, but you don't have much time. (Interview with Ms Felix 26-11-01)

This lack of time also motivated teachers to set priorities in terms of what they taught in order to meet deadlines such as report writing.

325: Ms Barter: We are actually motivated and dictated to by due dates, deadlines.

What I do and I assume others do is prioritise things according to due dates. (Interview with Ms Barter 4-12-01)

Another key emerging issue was the difference in the culture and objectives of the middle school and the senior school. All teachers interviewed in middle school agreed that the main objective of middle school was to heighten the development of skills such as social niceties, confidence, ability to speak up, ability to utilise resources and to develop methods for problem solving. This emerged as a key issue for teachers in middle school as it aroused moments of conflict of conscience when teachers were concentrating on developing these skills but felt the pressure of covering a minimum amount of subject content within a restrictive time frame. This resulted in an apparent conflict with middle school teachers believing that senior schoolteachers felt that students in the middle school were not seriously learning subject content but wasting time playing games. Middle school teachers were defensive about this.

One teacher commented that senior teachers referred to middle school students as “middle school fluff” and there appeared to be a discrepancy between what teachers viewed as respect and responsibility by teachers in each school. Middle school teachers were trying hard to give responsibility to their students, such as getting up and turning the fans on if needed without asking permission of the teacher first, whereas senior school teachers often saw this as a lack of respect by the student. Hence middle school teachers felt apprehensive about what senior-school teachers thought of them as professionals.

In summary, all three key issues highlighted; trust, time and a variation in the objective of education between middle and senior-school teachers, are seen as major contributing factors to the development of the culture or grammar of the middle school.

## *The Parents*

Nine parents were interviewed representing seven different girls as two couples were interviewed. Most fathers were unavailable to be interviewed but the two who were available were well informed about their daughter's schooling. When reading through the transcripts, from these nine parents, it became apparent that there were three key issues. These issues were; the parents' own educational experiences, trust and time.

The first issue, the parents' own educational experiences, had far reaching consequences. Although all of the parents had different educational backgrounds (i.e., some left school at 16 to take up apprenticeships, others went on to tertiary education against all odds, some just moved through their education without a great deal of thought and went on to obtain diplomas and further degrees later in life, and still others left school early but later did further studies) all of them had developed an insight into the importance of education and wanted this for their children. One mother when talking about her husband exemplified this.

109: Mrs Beck: If he (my husband) had have had his time again, if he had have known what he knows today, he would have applied himself and done something that was going to give him a better income. (Parent Interview with Mrs Beck 9-12-01)

The same mother also expressed the opinion that she had received so much help from the teachers when her own parents moved her into a private school that she wanted this for her own daughter from the beginning.

12: Mrs Beck: I always think that education is important and that I'd be offering her the best opportunities that there were. That's my views on it. I just felt that from going from a state school to The College I was quite behind by the time I got to Year 6 and there were areas that I needed ... help on but I obviously wasn't getting the extra help. Mum and Dad were taking outside extra maths, and um, Claire Beck's so much like me so that some of her weaknesses were the same as what mine were and that, and when I went to The College they just, you know, go into overdrive there with the help. And I had so much help for Year 6 and Year 7; I would never have managed going into Year 8 otherwise. The extra help they put in, I just thought why not have this from day

one? Why wait 'till Year 6, have it from the beginning. (Parent Interview with Mrs Beck 9-12-01)

These parents were willing to sacrifice part of their own quality of life to support their children's endeavours.

87: Mrs Beck: We've got Kardinal school here and my husband will say, "Check out some of the cars that are parked there. Here we are in our bombs, driving our kids to private school." And I say, "People prioritise." (Parent Interview with Mrs Beck 9-12-01)

More specifically, some parents were strongly in favour of providing single sex schooling for their daughters.

14: Mrs Rush: I certainly think that girls should go to a girls' school after I went to a mixed school 'till I was fourteen. If I hadn't have been moved I wouldn't have done anything. If I had have been put there at eleven, I mean I did alright, I still got three 'A' levels and ten 'O' levels, but I got 'B' grades and 'C' grades, whereas if I had actually been put there at eleven I could have gotten 'A's' no problem. But I was distracted. (Parent Interview with Mrs Rush 13-12-01)

For this family, that conviction, together with the fact that the husband believed that you get what you pay for, meant that they had two daughters at a single sex, private girls' school, in spite of the fact that the husband had done very well going through the public education system. The fact that he was the only boy in a lower working class township in England to go on to university probably also influenced this decision.

8: Mrs Rush: (My husband) went to a normal state school until he hit 'A' levels, which is sixteen in England, and he was the only one in the entire school to do 'A' levels. ... He was the only boy in town to go to university. ... He went through the state system and apparently breezed through with no problems. .... (He came from) a very low working class area, I mean his Mum is amazed; his brothers didn't do anything at school. They left at fourteen.

16: Mrs Rush: I wouldn't necessarily send them to a private school though. I was into an all girls' school but it is Mr Rush who went through the state system who's into high fee paying schools, not me.

20: Mrs Rush: He thinks you pay for what you get. (Parent Interview with Mrs Rush 13-12-01)

All of the parents interviewed appeared to have quite progressive ideas about education and realised that their children's experiences in school were vastly different from what they had experienced. This information had been gleaned from talking with their children and visiting the school and teachers. They believed that the main aim of education is to provide children with the skills to allow them to operate successfully within an adult society. One parent suggested how she felt the school could do this.

96: Mrs Vince: The fact that they offer a range of different things so that children can excel in areas in which they are able to excel in. That's important. So every child can go away feeling that they have excelled in some area. I think that's important. And just offer all the, not just the extra activities, but this whole um, I'm trying to think of the word, you know where there is caring for each other and the academic side and also the religious aspect and all the extra activities they offer. So that's probably the way to get well-rounded people. (Parent Interview with Mr and Mrs Vince 28-11-01)

The skills mentioned in particular were: confidence, flexibility, the ability to represent oneself in public, respect, organisational ability and good research skills. All parents wanted their children to leave school as well-rounded individuals and the academics were not the only thing important to achieving this outcome.

64: Mrs Case: She's got to be able to read; she's got to be able to do some maths. I want her to be able to read books and if you can read books you'd be able to learn anything, and of course socialising, being able to deal with people and have a good life.

69: Mr Suit: When Sally leaves that school I would hope that she is probably, in her chosen field whatever that may be, that she has all the technical expertise in the

present day to keep up with what's happening. I hope they're right up to the second with what is going on. (Parent Interview with Mr and Mrs Suit 26-11-01)

66: Mrs Stone: I'd like to think that there are lots of skills; there are a wide variety of skills that she would come out with. To me, I don't see that coming out with a score of 99.5 in four subjects at the end of Year 12 will do anything for Ruth. Because she is very different and she has problems so she needs to have lots of skills in lots of areas so that she can be happy and successful. (Parent Interview with Mrs Stone 27-11-01)

No one emphasised the need to remember copious amounts of content or the necessity to do well in the external examination system but during the course of the interviews it became apparent that it still remained a strong influencing factor when parents were forced to make choices. This was the area that had proven so crucial to the future of their own educational experiences and they saw no reason to believe that anything had changed. This apparent conflict in expected outcomes of the education system resulted in parents who were excited and embracing of new and different ways to educate their children but at the same time were adamant that they needed guarantees that these "experiments" would not adversely affect their children's performance in the external examination system. All parents interviewed showed a reluctance to accept any new methods of education for a protracted period of time expressing the opinion that for short blocks of time they could be advantageous but in the long term they ran the risk of watering down the mandatory content. One father when asked about the possibility of running the entire school programme around integration as their children had already experienced for a two week period, worried about the effect on his daughter's TEE.

298: Mr Vince: I can see it as probably working OK for those kids who aren't going to go through TEE, because then it really doesn't matter if they do miss out on one particular aspect. If they miss out on a foundation, which is going to affect them in TEE, then there is a major problem. (Parent Interview with Mr and Mrs Vince 28-11-01)

This opinion appeared to be based on the premise that there was nothing wrong with old-fashioned discipline even though some bemoaned the fact that school for them

had been tedious and their children had many more opportunities. They all wanted their children to come out of their school experience as well-rounded individuals. Their own background had a strong impact on the type of reporting system that they preferred and most expressed the opinion that letter or percentage grades were far more meaningful than an outcomes-based reporting system although none could really explain why. Most wanted reports that reflected, not what the students learnt but rather their ranking compared to an average mark that would be applicable to across the state. When speaking about outcomes-based reporting one parent commented that it didn't really tell you a lot.

145: Mrs Beck: I don't think that tells you a lot. I like to know in percent rate, with all the Year 7s, where she actually is. Like a ranking, I think a ranking would be pretty good. So I knew, OK she's only just average, or she's a bit below average.

147: Mrs Beck: You don't want to know who's got what marks. I don't care what the other kids have done; I don't want to know names. ... Especially when you are paying those sorts of fees. It would be nice to have more of an idea where they're at. I don't think I would be the only one to say that though, would I? (Parent Interview with Mrs Beck 9-12-01)

The second issue of trust was expressed in the belief that, as parents, it was necessary to trust the teachers and the school to know what was best for the students as this was their field of expertise. Parents admitted that they did not have the background to qualify them as competent when called upon to make complex decisions about the way their daughters should be taught or the content to be covered. They preferred to leave this up to the "experts" but were not averse to new approaches.

162: Mr Suit: No, I don't think there is anything wrong with a bit of lateral sort of thinking or looking at things in a different way. I mean, education is education, whether it's done in many different ways. It's not really a problem. .... I'm very susceptible to change. I don't think change is a bad thing, what so ever, as long as they are not going to do it at the expense of ... You've got to have some sort of foundation. (Parent Interview with Mr and Mrs Suit)

They did, however, want guarantees that any new or different ways of teaching would not jeopardise their daughters' prospects for further studies.

319: Mr Vince: Maybe the school could underwrite it that if they don't come up to scratch towards the end then there's extra tuition. You know, in the last year. (Parent Interview with Mr and Mrs Vince 28-11-01)

Although parents believed that they should trust the school they had difficulty in accepting change too far removed from their own up bringing and felt that if the school tried anything too radical that parents would show their disapproval by withdrawing their children.

Time emerged as the third key issue for parents, as it had also done for the teachers. Parents found that they had insufficient time to be too actively involved in their children's education. Lack of time could be seen as one reason why parents did not want change in the reporting system because they didn't have the time to read through it carefully and understand exactly what it meant for their child. Although the outcomes-based reporting style provided parents with more direct ways that they could help their children none had really read it through with their child to find out what it said or what could be done. Some parents needed help interpreting what was intended and others needed the time to sit down and make sense of it with their child.

In summary, all three key issues; the parents' own educational experiences, trust and time proved to be major factors that influenced the parents thinking about their own children's education. Parents were mainly interested in their own children and did not have the time to become involved in other school-based issues. Although voicing the opinion that they had to trust the school to make the appropriate decisions for their children's education, most parents wanted to be advised about changes in school policies. By their own admission, they did not have the time or expertise to comment knowledgeably about the issues although their own educational background appeared to give them some authority when pushed to make a decision or to complain about a decision that had already been made.

## **Conclusion**

In this chapter I have outlined those factors, which in my opinion contribute significantly to the development of a school culture.

The first section deals with an overview of the whole school followed by a synopsis of the key issues arising from an interview with the principal. All five key issues highlighted; the principal's beliefs about the role of education, schools and society, outcomes-based education, the importance of staff and the external public examination system, are seen as major contributing factors to the development of the culture or grammar specific to the school in question. His admonishment that no difficulty is "insurmountable" (75) and his vision for the school (as outlined in issue three) form the basis for how he works with the staff and his procedures for providing motivation for his teachers.

The second section deals specifically with the middle school. It begins with an overview of those structures that contribute to the physical culture of the school such as the building, class sizes, timetable and administrative structure. Following this I outline the key issues from the teachers and parents of the students observed. The three key issues highlighted for the teachers; trust, time and a variation in the objective of education between middle and senior-school teachers, are seen as major contributing factors to the development of the culture or grammar of the school. These issues appear to overlap significantly with the key issues important to parents; the parents' own educational experiences, trust and time.

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## Chapter Five: Bernstein's Framework and the School

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### **Introduction**

I begin this chapter by looking at how the structures in the school are classified. This first section culminates in a summary of the classification issues and their impact on the instructional practices in the middle school. The rules of recognition are then explored using the headings of Principal, Parents, Teachers and Students. The chapter concludes with a discussion of the culture of the school and how Bernstein's framework has been used to analyse the data.

### ***Classification***

In Bernstein's (1971b) theory, the word classification is used to define the power relations, which are responsible for the creation of boundaries or divisions, between groups of people, between different categories of discourse (such as school subjects) and between different agents. In this way power is what causes divisions in society. These power relationships are responsible for creating social classes and reasonable or justifiable relations of order within and between the social classes. The concept of classification is also used to define the relationships between categories such as discipline-based subjects. Power relationships between the different discipline-based subjects create a space reserved solely for that subject. This implies that the meanings of the subjects are only understandable in the relationship the subjects have with each other. It is possible to transfer the concept to the relationships between the different bodies of power within a school as easily as it could be between the different discipline-based subjects. The insulation of the subject is what allows it to retain its identity and if that insulation is threatened then the subject is in danger of

losing its identity. Bernstein allocated the label of a Collection Code to those discipline-based subject areas that are strongly classified and framed and the label of an Integrated Code to those areas in the curriculum that are very weakly classified and framed and show little or no resemblance to discipline-based areas of study.

The allocation of the strength of the classification is arbitrary in that it can be seen to reveal itself in power relationships. How to define these relationships and categorise them is dependent on perception, hence the need to provide a descriptive background account to make explicit the thoughts of the researcher. The actual strength of classification is not absolute; it is necessary to measure the perceived strength relative to something else. The allocation of a  $C^{--}$  for very weak classification and  $C^{++}$  for very strong classification is employed by Daniels (1987) and will also be used as a coding mechanism in my analysis.

In this section I concern myself with the classification of power relationships within the school, relating them to the concept of Collection Code and Integrated Code as defined by Bernstein, and argue that the beliefs of parents are indeed an internal component of the school and not external to the school. Although residing outside of the school premises their ideas filter into the internal classification of the school due to the fact that they compose one of the social elements in the school through their own and their children's beliefs and actions.

In this analysis I examine several aspects of the school's culture and space in order to determine a value of classification that could be reasonably attributed to each category. This value can be arrived at by considering the relative degree of power assigned to each category and allocating an arbitrary value of  $C^-$ ,  $C^{--}$ ,  $C^+$  or  $C^{++}$  to each. These categories are the Principal's Views, Parent's Views, Timetabling, Spatial Arrangement, Teachers and Teaching Team Relationships, Curriculum Constraints and Teacher/Student Relations. A summary of how these power relationships impact on teachers' instructional practices, which informs the framing issues, is also included here.

### **Principal's Views ( $C^{--}$ - $C^{++}$ )**

When thinking about the meaning of classification, as used here, and the Principal's views I found myself becoming quite confused. I was receiving two very distinct

messages from what the Principal was saying in his interview at different, for want of a better way to describe it, levels of consciousness. On the one hand he kept referring to the words integrated and holistic as if they carried some sort of miraculous solution. He emphasised the need for an education to mould people so that they were flexible, adaptable to change, able to speak well, be confident and assured. He stated that, on reflection, he would rather see children devote themselves to what is often termed the co-curricular, i.e., sport, music, debating, chess, fun and games, public speaking etc, than to isolate themselves in an academic based view of the world. He emphasised the belief that the academics are often a matter of maturity and can be easily achieved later in life.

45: Principal: My view is that the TEE, yes it's of value to get whatever score for the next step of your life, but those other qualities, in my view, are so much more important. Ten to twenty years down the track, how they've gone in their TEE really is not going to be of value to them. It's going to help them obviously with the next step where they go on to uni or whatever but what they do there is really up to them. How they've used their skills whether with sport or music or whatever so that they've got those skills or qualities to use is probably more and more value plus the values and the ethics that you develop in young people, you know; compassion, humility, confidence in themselves, they're going to be much more valuable to them later on in life. I guess in my view, [those] that just focus on the academic or not even on academic and just focus on co-curricular, I guess that would probably suit me more if they focused on a range of sport, music or drama, they can pick up the academic later on. Often that's just a maturation thing. They're leaving with good values and good principles of life, that would suit me, you know, more than if they had just a narrow outlook and just focused on the blinkered academic view. (Interview with the Principal, 11-10-2001)

This obvious emphasis on what Bernstein would categorise as an integrated code, made me immediately categorise the principal's views as being weakly classified. By this I mean that he views categories of subjects and various other power structures as indistinct categories with much blurring between their boundaries rather than as distinct categories, well defined by their relationships with other distinct categories. I

would be tempted to say, that at his most conscious level, his views can be classified very weakly and would assign a value of  $C^{-}$  to them.

However, in the interview he also emphasised the nature of the curriculum, involving the eight key learning areas, as very important. His understanding of providing an education that was holistic was to provide as many opportunities to students as he could in terms of the academics and co-curricular activities, a smorgasbord of activities, so to speak. These activities were divided into very clear categories, which hold them distinct from each other. This view would then imply that he held a very strong notion of classification, perhaps at a deeper level of consciousness and I would then classify his views as  $C^{++}$ .

23: Principal: Holistic would be in the curriculum aspect that you're giving students the opportunity for a liberal education from that point of view that there's a balance across all subject areas and they get exposed to all the eight learning areas. Holistic I also would view as part of and that's why we call it now not extra-curricula, we call it co-curricula, is that is an important part in my view of the curriculum. The music in terms of bands, orchestras, choirs, the sports that they do, the drama, the dancing, debating, public speaking, art club, music club, save the earth club all those sort of things that's part of the holistic. So that's enabling the child to use whatever their talents. We hopefully create a smorgasbord of opportunity so that they can use those talents. (Interview with the Principal, 11-10-2001)

The conflict apparent in his views that came across to me, initially served to confuse the issue, in terms of which category of classification I would use. Which extreme of the continuum was he precariously balanced on? At his more conscious level I would classify his views as  $C^{-}$  but allowing for the workings of, what I term, his more sub-conscious level, I would put them at the opposite extreme of the continuum at  $C^{++}$ . This conflict can be witnessed in his realisation rules, where he appears to want one thing but sets up requirements in the school that express a different opinion. Because of the apparent pluralism of his views I have chosen to decline from assigning a value of best fit to his views and instead stay with a spread of values that are

indicative of the conflict. This conflict can be seen when looking more closely at the other categories to come.

In terms of the principal's positioning within the school, his role would be strongly classified, C<sup>++</sup> as he has been in the position for many years and, at his own admission, his views carry a lot of weight with the governing body of the school.

115: Principal: Yeah, well, let's be blunt about it, I'm not being egotistical here, I think (my views have) had an impact. I guess someone being in the school that length of time, the notion of a learner centred school, the phases of development, looking at who we're teaching rather than what we're teaching, is an important philosophy that I've tried to impart. The values, Christian values, practises within the school, I mean they would have been there but you know it's something that I felt that the school was ripe for me to sort of encourage that a bit more. (Interview with the Principal, 11-10-01)

This should mean that this apparent pluralism of his views could have a strong impact in the foundations he has laid for the school in the past 14 years and hence need to be carefully considered when trying to develop different approaches to teaching within the school.

### **Parents' Views (C<sup>--</sup> - C<sup>+</sup>)**

The parents interviewed presented some conflict in their views with regard to integration, as did the principal. Seven families were interviewed, (mainly the mother, but two couples) and it was revealed that they were largely well educated, but not everyone had proceeded to university. Their educational background is important in that it allows the reader to understand their views towards their own children's education more clearly. Some parents were nurses and had found that they needed to continually go back to their education in order to update their skills. Some of the parents had left school in Year 10 and had obtained apprenticeships or similar schemes and had continued to study and be trained on the job. These people had gone on to start their own companies and were self-employed and two of them needed two incomes to sustain the family. They were finding it a struggle to keep their daughters at this school but valued the educational experience offered to such an extent that they were prepared to sacrifice their lifestyle to do this. One had gone

on to university becoming qualified as an engineer although he came from a family where there was no history of further education. He had to seek out places where he could sit the appropriate examinations to obtain entrance to university even though no one else in his village in England had ever gone on to further studies before. Although he was from the lower socio-economic classes his wife would be considered to be from the middle classes.

In accordance with Bernstein's work with the socio-economic classes, three of the families would be considered to have come from the lower socio-economic classes, two from the middle classes, one from the upper class and one family would be a combination of middle and lower socio-economic classes. This would mean that they would not be likely to all possess similar realisation rules in terms of how they exerted their power within the school and also in terms of how they viewed integration in relation to their children's education. They should all possess similar recognition rules however, as these rules, according to Bernstein, are common across the classes.

One common thread throughout the interviews with the parents was that they all valued education very highly and had some form of struggle or regret about their own education.

12: Mrs Stammer: I went up to 'A' levels at school. I had to do them at evening classes because my father died as I was about to go on to do them and then I sort of had to look after my mother who went to pieces and I had younger brothers and sisters. And then I went straight into work. (Parent Interview with Mrs Stammer, 07-12-01)

91: Mrs Beck: I left at the end of Year 10. I didn't apply myself like I should have done. That's why I've pretty much drummed that into my kids. (Parent Interview with Mrs Beck, 09-12-01)

4: Mrs Rush: I moved around a lot actually. I changed schools quite a few times. ... I was fourteen when my parents decided that I ought to move because it was a mixed school and I kept getting distracted. So I got a scholarship for a Girls' Anglican School. (Parent Interview with Mrs Rush, 13-12-01)

109: Mrs Beck: If he had have had his time again, if he had have known what he knows today, he would have applied himself and done something that was going to give him a better income. (Parent Interview with Mrs Beck, 09-12-01)

Because of the way these parents valued education they were determined to give their children what they considered to be the very best opportunity possible. Most of these parents were largely compensating for what they didn't have when growing up and although they realised that their own education was not perfect and supported new and different ways to learn, when pressed, went back to thinking that any attempts to change the educational process required guarantees on the part of the school that these new initiatives would work. When talking about implementing new initiatives one father expressed the opinion that he wouldn't have any problems provided the school could give some guarantees.

319: Mr Vince: Maybe the school could underwrite it that if (the students) don't come up to scratch towards the end then there's extra tuition. You know, in the last year. (Parent Interview with Mr and Mrs Vince, 28-11-01)

Another father responded that he needed to perceive that the school was doing the right thing without needing to be advised of details.

104: Mr Suit: Well, as long as I perceive that they are doing the right thing in an educational and a physical and an emotional sense for (my daughter), I don't want to know anything else about policies or hierarchy structure or what ever. (Parent Interview with Mr and Mrs Suit, 26-11-01)

This father though, when questioned about the possibility of the school introducing radical changes initially commented, "You'd probably only have the school for a little while" (205). (Parent Interview with Mr and Mrs Suit, 26-11-01) When further pressed he reiterated his view that, as parents, they had to have some degree of "trust" (219) that the school would provide the right sort of education for their children. His view matched the views of the principal who also believed that if parents were paying a lot of money to keep their daughters' at the school then they should be able to expect a high standard of education from people who professed to be experts in the field. The principal did believe that, for the school, it was not

possible to rely on this issue of trust too greatly. He emphasised the need to really listen to parents' comments and be seen to ask their opinions at regular intervals to keep up to date with parent expectations. He also believed that it was necessary to educate parents about new ways of learning and teaching.

121: Principal: There would be those (parent) that might have experience and knowledge and that's where I talk about the partnership they can be having with their daughter but it's more encouraging and supportive rather than sitting down with them with their maths. There's no way probably they can help them with their maths from what they did at school. ... There always will be those who say well look, you should be doing this language and not that but very few would question sort of the maths or the English or, I think they see that they are paying big dollars to hopefully rely on us as the professionals to get the job right. But I again want it to be clear, we're not just burying our heads in the sand and thinking we're OK, I'm all right Jack, doing what we think is best, I think we have to be receptive to feedback from parents. Part of the questionnaire that we do, or survey, helps with that, it gives them the chance to talk about those sort of issues and I think it's just the nature of people that they like to get it off their chest if they've got a bit of a gripe. (Interview with the Principal, 11-10-01)

All parents interviewed displayed confusion when questioned about the ways in which the school could best provide an education for their daughters, strongly supporting the ideas of integration but at the same time falling back on the way they were taught and needing to be careful about what was attempted in terms of needing guarantees for these 'experiments' if their daughters were in some way disadvantaged. They all wanted their daughters to leave school having developed a wide variety of skills, especially technical skills, values and flexibility and a strong belief in themselves and who they are. The development of these skills was more important than the academics and was the reason the parents had chosen this particular school for their children.

Hence when classifying parents' views, although they at first appeared supportive of initiatives such as integration they were reluctant to expose their own daughters to these 'experiments' for any great length of time. In the short term their views would

support the notion of integration and would be classified as C<sup>-</sup> but their insistence on guarantees served to reduce the possibility of integrating on any grand scale. The end result was a stricter form of classification of C<sup>+</sup> that slightly favoured the use of discipline-based subjects in the long term. The attitude in all likelihood was due to the acceptance of the need to sit the external examinations at the end of Year 12 in order to proceed to university. Parents were happy for minor experiments to be carried out by teaching staff in middle school as long as by senior school their daughters were fully occupied with schooling that supported the external examinations. The principal's views towards experimentation in terms of the way the children learn was perhaps more liberal than the parents' views.

79: Principal: I think in a school like this you can take risks to maybe experiment because I don't think you'd be doing any harm to those students' development. I think maybe the way we've been doing it has been doing some harm. (Interview with the Principal, 11-10-01)

His views were however kept in check by the need to keep parents happy if they were to continue paying big school fees. This meant that even though it was generally recognised that the professionals were best left to organise the style of education, the parents still had quite a significant amount of control over what was considered acceptable experimentation. They had been instrumental in getting the language studied in the junior school changed from Japanese to Indonesian in the past. Their power in the school would be classified much more weakly than the principal but with some degree of power as a group, C<sup>+</sup>.

135: Principal: I think they (parents) have got to rely on the professionals. ... On the one hand I'm saying you've got to rely on the professionals, but the fact is that we're receptive to any input so we've created that open opportunity but some parents won't do that because they feel it will backfire against them or their daughter. I think human nature unfortunately is an area that I haven't been able to break down in this school. There are always those parents that won't say anything about a staff member because they feel their daughter will be picked on. (Interview with the Principal, 11-10-01)

Parents were in favour of integration in principle and the development of skills that would enhance their daughters' quality of life and flexibility in the work force. Their own educational background and belief that the external examination was the main goal of schooling set limiting factors on what they could conceive of as 'good' schooling. Teachers were able to experiment with styles of learning only to the extent that was supported by the parents.

### **Timetabling (C<sup>+</sup>)**

Organising the timetable in any school is a massive task that has the potential to prevent some children from studying their chosen subjects because of the difficulty of matching classrooms, resources, teachers and students. An examination of the timetable therefore can shed some light on the importance of various power structures within a school. A very traditionally arranged timetable with some subjects (i.e., mathematics, English, science and social science) taught early in the day and other subjects (i.e., sport, music, drama etc) taught later in the day when children are less focussed is indicative of very strong classification of the discipline-based subjects and would be categorised as C<sup>++</sup>. In a school with very weak classification there would be no rigid timetable and periods would not be divided up into discipline-based subject areas.

In this school the timetable in middle school was carefully planned to allow for some degree of flexibility. It necessarily reflected the intent of the middle school ethos. All four core subject areas; mathematics, English, social science (SOSE) and science, were purposely taught at the same time by the same group of teachers to allow for the implementation of units such as the Integrated Forensic Science Unit. This fact would suggest that the timetable was designed with an integrated code in mind and did not strongly support the power of the individual discipline-based subjects.

The core subjects were timetabled into the block of time mostly before lunchtime but not frequently during the first lesson of the day. Teachers had recently suggested that it would be better to have academically demanding subjects at the beginning of the day.

57: Ms Barter: We suggested it because we felt that the first periods of the day are the best periods. See in other schools I noted that they will always put that subject

which is more academically demanding first thing in the morning, when the children have got energy. (Interview with Ms Barter, 4-12-01)

The fact that the core subjects were not timetabled at the beginning of the school day could be interpreted as displaying a less strongly classified approach. Less power was attributed to the individual discipline-based subjects. The timetabling of Chapel and Assembly and Form at times of the day that are traditionally considered to be the ideal times for students to learn (i.e., early in the day) also suggests that pastoral care and the development of organisational, participatory and listening skills and values, which were emphasised in both Chapel and Assembly, are highly regarded.

The timetabling of meeting periods for teachers of the four core subjects was intended to allow time for them to discuss pastoral care issues and to experiment with teaching content. Meeting periods gave teachers access to shared time between disciplines allowing for the possibility of integration to occur. These meeting times were timetabled for the earlier part of the day.

There was some scepticism amongst teachers as to how the timetable was devised and the importance of students' learning in the process of developing the timetable. Teachers indicated that they were aware of the difficulties of planning a timetable. When questioned about whether children's learning was taken into consideration when planning the timetable, one teacher replied

43: Ms Felix: Well I think it's always questionable, you haven't got the answer of how children learn precisely, there's not a perfect model for that, and after you get past that then I think obviously it would come down to fitting in with parents who actually have their kids here and are paying fees and it would come down to convenience, time and staffing. (Interview with Ms Felix, 26-11-01)

A close examination of the timetable and teachers' views towards timetabling can reveal important insights into the culture of the school. A close understanding of this culture makes it easier to know what can be attempted in terms of new ways of learning. Teachers' comments about the timetable can reveal their biases. The teacher of the Integrated Forensic Science Unit, Ms Manor, revealed her bias towards the discipline-based subjects when discussing what she foresaw as a more ideal timetable. She preferred these subjects to be timetabled early in the day, after form

period. It was obvious that her first emphasis was on pastoral care followed by the teaching of the discipline-based subjects. The school's timetable did not accommodate co-curricular activities indicating that the activities were of less importance. Ms Manor, in keeping with middle school philosophy, elevated their importance by suggesting that they should be timetabled in.

232: Ms Manor: I would like to see the 2:2:1 timetable. ... What I want is form in the morning uninterrupted ... where the form teacher takes responsibility for the pastoral care of that group. I would also like to see fewer interruptions in terms of choir, music, sport etc, in time that is supposed to be pastoral care time. ... Periods three and four are the best time of the day for teaching in my lowly opinion. ... Pastoral care and teaching takes priority in the morning and then in the afternoon you've got time for those, what I consider to be essential community but not curriculum based areas. ... We need to have a time when they can do that sort of stuff, (co-curricular activities should be) timetabled in. (Interview with Ms Manor, 7-12-01)

As the timetable has some degree of flexibility built in to it and allows for skill development and pastoral care it cannot be said to be very strongly classified in terms of the discipline-based subjects. It still remains reasonably strongly classified in this respect, however, and I will notate this by using a C<sup>+</sup> classification.

### **Spatial Arrangement (C<sup>+</sup>)**

The middle school has purpose built classrooms within the one building, which have access to a joint, central open learning area. There are insufficient classrooms in this building and use has to be made of the older classrooms that originally belonged to senior school. Certain subject areas have their own purpose built rooms. These areas are the traditionally more practical areas that need specialised equipment such as; science, art, food and textiles, design and technology, drama and music.

The layout of classrooms and laboratories and the necessity for the timetable to utilise such buildings contributes to strong values of classification.

The new middle school building, which is not large enough to house all of the middle school students, was built to reflect the new philosophy of the middle school. The central, open study area allows for all students to come together and promotes an

integrated code but the provision of classrooms utilised for separate subject areas also promotes a collection code, thereby reinforcing the pluralism evident in the principal's and parents' views. The added economic constraints of the older, purpose built laboratories means that the outlook in the school is closer to that supporting a collection code than an integrated code and I have therefore given a value of C<sup>+</sup> to the category of spatial arrangement for the middle school. For the senior school the classification of spatial arrangement would earn C<sup>++</sup> as there is no purpose built building with communal areas.

### **Teachers and Teaching Team Relationships (C<sup>-</sup>)**

The existence of teaching teams within the middle school is recognition of the fact that the discipline-based subject areas are no longer seen as appropriate. The principal acknowledged that it is acceptable to attempt 'experiments' in the school with the way of teaching and learning because in his opinion the 'old way' is most likely to impact adversely on the students' learning. He was excited by the idea of the "interdisciplinary or inter-faculty type of approach where we (the middle school) have set up teams, seven, eight and nine, that they plan work out ... plan what they want to do with their students, negotiate with their students" (Interview with the Principal, 11-10-01 (89)).

79: Principal: I think in a school like this you can take risks to maybe experiment because I don't think you'd be doing any harm to those students' development. I think maybe the way we've been doing it has been doing some harm. (Interview with the Principal, 11-10-01)

The principal's attitude that it is important to 'take risks' has opened the way for the development of a middle school philosophy. The purpose of middle school teaching teams "is pastoral care in Year 7 and 8 and in Year 9 it is more curriculum based" (Interview with Ms Manor, 7-12-01 (44)). Teaching teams consist of a teacher from each of the four core learning areas for the year level. In middle school there are three teams, one for each year level, with four teachers on each team. Each of the teachers teaches her discipline area to each of the four classes in the year level and the school has been using this arrangement since the inception of middle school. The

year level coordinator expressed the opinion that, for her, it is advantageous to teach all of the students as she can develop a closer relationship with the entire cohort.

The fact that the teaching teams are composed of teachers from different discipline-based areas works towards diluting the power of the individual subjects and favours some form of an integrated code. Additionally, the integrated unit was seen by the teachers to provide an opportunity for the students and teacher to get to know each other and in this way was contributing to the pastoral care aspect. The fact that the discipline-based areas still exist, however, indicates that the movement towards what Bernstein terms an integrated code is a slow process, one that is not necessarily solely dictated to by the desire to integrate and that there still is merit seen in retaining the format of discrete areas of study.

To enable a value of classification to be arrived at it is necessary to explore the teachers' experiences of working together and the importance they place on the discipline-based areas compared to the development of an integrated approach. The fact that teaching teams are considered desirable weakens the value of classification, but how they operate also influences this value.

For the integrated unit the teaching team operated in a sense within the discipline-based subject areas with individual teachers responsible for their own subject areas. The science teacher who was also the year level coordinator took on the primary role of organisation of the unit and individual teachers contributed with what ended up as separate sections within the integrated unit. Students could use these sections with little or no guidance from the teachers. The structuring of the unit in this way was done to assist students with their own organisation because it was generally felt that 12 year olds would not know how to do this well. Where the science, social science and English subject areas were quite well integrated, the mathematics and one aspect of the social science appeared as distinct activities.

The science teacher had also taught all subject areas in the past but the other teachers were specialists in one or two areas, except for one who was primary trained. Their training could have served to restrict their thinking in terms of what they could do within the integrated unit and instead of planning backwards from the desired outcomes the teachers felt pressure to include components that were recognisably mathematics, science, social science and English. The teachers were concerned about

criticism from senior schoolteachers if they did not teach content applicable to the external examination system. Some of the comments from the principal validated their concerns. He believed that the senior staff are restricted by the external examination system to such an extent that there is insufficient time for “experimenting” in senior school, a belief that was held to a lesser degree by the parents interviewed.

99: Principal: We’ve focused a lot of energy on junior and middle school, I think we now need to focus a lot of the energy on our senior school ... We’re developing that team approach but a lot of it is to do with the nature of the TEE structure, I think if that can be broken down to some extent we can develop teams. I mean we can do it in Year 10 but whether staff will be as sympathetic there I don’t know because they’ll be saying “well look, we’ve got to prepare them for the TEE”. (Interview with the Principal, 11-10-01)

There are many restrictions on the teaching teams being able to work efficiently within the philosophy of the middle school. A lack of time is most important when it comes to implementing units such as the Integrated Forensic Science Unit and was well expressed by one teacher in particular.

331: Ms Corr: I can only go on the current team and the people I’m working with, if we had more time we would definitely utilise it to enhance the programme. ... I think if we had more time, we all have ideas of what we could do but you kind of don’t even allow yourself to think of them because you just don’t have the time to develop the idea or whatever. ... Sometimes I can’t realise my ideas and I find that really frustrating and there is a trade off and you kind of have to remind yourself about that. (Interview with Ms Corr, 26-11-01)

With changes to members of the team this lack of time became even more important. It was often expressed by the team leader that she wanted to get together with the team members. She wanted to reflect on the process to strengthen it for future years and to meet with the next year’s team members to discuss the unit. The two periods

per cycle already timetabled were insufficient to do this adequately given that the teachers were occupied largely with pastoral care issues.

Since, the inception of teaching teams there was greater collaboration and cooperation amongst teachers from different faculties helping to weaken the classification value. This cooperation and collaboration enabled a greater understanding of what is taught in the different subject areas and recognition of the fact that there are many ways of reinforcing skills and content across the discipline-based boundaries. There was a general feeling that cooperation between teachers can only enhance the learning potential for the student. The values held by the principal impacted on the teaching team relationships, the flexible nature of the timetable and the philosophy of middle school. As a result teachers and students had greater access to each other than would be possible in a strictly defined discipline-based approach to teaching and learning. This collaborative aspect was well explained by the year level coordinator.

224: Ms Manor: (When conducting an integrated unit of study) we always make sure we are in relatively close proximity so that if you are not sure about something you can go down and have a look, or come up and ask someone or go next door and see what they're doing. It's about global sharing rather than simply you being a semi-autonomous educator. (Interview with Ms Manor, 7-12-01)

In summary, the mere existence of teaching teams does not necessarily contribute to the weakening of classification as described by Bernstein. In some schools the presence of teaching teams may reinforce discipline-based subject areas and serve to, even more strongly, define their boundaries. In this school, the presence of teaching teams reflected the weakening of classification and a move away from the discipline-based subject areas for middle school at least. Spatial arrangements, timetabling and the view of, in particular, the senior schoolteachers served to limit the weakening of this classification value. I have thus chosen to assign a value of  $C^-$  to the classification of teaching teams in this school.

## **Curriculum Constraints (C<sup>+</sup>)**

### ***Resources (C<sup>+</sup>)***

All students in Year 7 owned a laptop and they were required to bring it to each of their classes. Teachers were encouraged to make use of this facility and, although many struggled, it proved impractical whilst doing experiments in a science laboratory. Where students could use the Internet facility at the school to search for references in any subject and thereby utilise the laptop as a tool in any discipline, teachers tended to devise folders that made use of Internet links, which were discipline-based. The laptop often took the place of books for the student. It was possible for the teachers to provide up-to-date information in a form that was more accessible to the student than was possible with class sets of books. The information supplied tended to be in a format that favoured a strong classification of the discipline-based areas of study. However, laptops can also be seen as less strictly classified than discipline-based books.

Comments of the teacher observed support this view of the use of laptops.

305: Ms Manor: The school policy that influences me the most would be the laptop technology impetus. I think that I use the laptops a lot and I've written those websites for each of the topics. Even though there is a heavy emphasis in science for instance on practical work they write their results up on and make tables and do Inspiration documents, all those types of things. There is a lot of emphasis on technology and that actually impacts much more on me than anything else. It makes it difficult, in a practical subject but on the other side also it opens up scope for different ways of doing it as well. (Interview with Ms Manor, 12-10-2001)

In science the teacher also made use of booklets that were subject specific and could be used by the students to record answers in. These booklets were written by one of the teachers and kept in the science laboratory. The frequent use of such booklets acknowledges a strong dependence on them and strengthens the classification towards that of Bernstein's collection code. Other subject areas also used subject specific books that were in addition to the laptop.

The integrated unit made use of many resources that could not be described as subject specific. These included street directories, telephone books, objects that the students brought from home to act as pieces of evidence in the trial, the use of Excel to graph data from surveys, the use of Microsoft Word to write and print newspaper articles, digital cameras etc. Teachers in the areas of social science and science were observed to make considerable use of these everyday items in their subject specific lessons from time to time.

The use of discipline-based teaching resources in the form of books/booklets and files that the teacher created for use on the laptop implies that curriculum resources in this school were very strongly classified. The use of everyday items in the integrated unit and the possibility of using the laptop as a resource that does not have to be used solely as a discipline-based resource served to weaken the classification value and I would allocate a value of C<sup>+</sup>.

### ***Departments and Department Heads (C<sup>+</sup>)***

Although teachers have a significant degree of control over what they teach and how they teach it within the confines of their own classroom, the middle school has discipline-based department heads, which would appear to support the notion of strong classification. In science the department head strongly supported the notion of integration and teachers getting together and collaborating on the “what” and “how” of teaching.

12: Ms Manor: I think in terms of curriculum issues we do have quite a say. Being semi-autonomous educators of course you’ve got a reasonable amount of say over what you do. In the middle school particularly you have a lot of say over what you teach, how you teach within, of course, the constraints of using laptop technology and the curriculum things that are coming in. It does give us a lot of flexibility... 16: In a normal high school you’d have a head of department and the head of department would control the curriculum. Heads of departments traditionally are TEE focused and they are very traditional about who teaches what and the men teach physics and chem. And the women teach biology, human biology. ... 20: For middle school, (we have a head of department but) he’s a very inclusive person and is prepared to look at cross-curricular

things. ... He's also taught maths and science ... He's typical in his gender but I don't think that in his attitude he's a typical male head of department. (Interview with Ms Manor, 7-12-01)

Normally the development of the structure of discipline-based departments with their own head of department would lead to the implication that school philosophy would strongly support the notion of classification. In the middle school in this study, there has been a departure from what teachers would describe as typical department heads. There is also a close association between these heads and the cross-curricular teaching teams. As a result, in this middle school the value of classification should be more weakly defined than would be expected. I have therefore allocated the category of departments and department heads a C<sup>+</sup>.

### **Referring to parents and students**

In the thesis some students are referred to with a Christian name only while other students are referred to by their Christian name and surname. This is done to allow the link between the student referred to and their parent, who was also interviewed, to be made. I was unable to interview parents of some of the students included in the thesis and these students have been referred to by a Christian name only. Parents are referred to by their surname, (nine parents were interviewed in total, representing seven girls as two couples were interviewed). All names have been replaced with pseudonyms.

### **Teacher/Student Relations (C<sup>+</sup>)**

Teachers have considerable control over classroom dynamics and the types of behaviour they will accept from the students in their class. However, given the strong emphasis in the middle school on pastoral care aspects in this school, the teachers did not have as much power as they would have in a more authoritarian approach to educating children. They found themselves reminded of this fact when parents complained to the school that their child was not happy.

418: Ms Felix: You've got to do the best by the kids in maths. Parents see maths as a really critical subject. Even though it's the end of term I'm panicking that maybe I

haven't done the best job for some kids. I worry about what I can do. (Interview with Ms Felix, 26-11-01)

Although teachers felt that there would be some support for them from higher management, in particular their year level coordinator and the head of middle school, they felt that they might not gain the support that they were anticipating. This wariness made teachers concerned about their role in the school and what they felt they were able to do in the classroom. It also acted to transfer some power from the teachers to the students.

117: Ms Barter: There is a real work ethic here, but I think the work ethic is actually based on fear rather than creativeness or wanting to do better, it's survival. (Interview with Ms Barter, 4-12-01)

Students in the class came from a variety of backgrounds but, in general, their parents showed concern about the quality of their education and tried to be involved to varying extents. Of those prepared to be interviewed several parents were very involved in helping their children with their work and were aware that many children at the school had some degree of learning difficulty.

298: Mrs Stammer: Strange isn't it? So many children. A lot of parents I speak to, their children have problems (with learning difficulties, comprehension in particular). (Parent Interview with Mrs Stammer, 7-12-01)

The students interviewed were aware of this background of concern and were conscious of what was required from them to satisfy their parents and teachers. For some children this proved very difficult and they found themselves in social situations that were deleterious to their learning, preferring to chat instead of concentrating on what the teacher was saying. This was exacerbated by some teachers' apparent lack of control. Others, particularly those with minor learning difficulties, appeared very motivated to succeed and were willing to put in extra effort and to remove themselves from the social grouping in order to concentrate on their work. The following extract is from an interview with a girl who was mildly dyslexic and had similar attitudes to that expressed by the other two girls who had learning difficulties.

93: Annie Rush: I think there's different ways of saying what you're supposed to like teach the kids because like, some teachers just scream at you and say like this is how it happens. They don't have much control of the class. .... 95: When everyone's like talking and stuff she just talks and expects you to listen and everybody's like shouting and stuff. Ms Manor (the teacher observed taking the integrated forensic science unit) and some other teachers, they get control of the class before they speak and get everyone to listen. ... 99: Some people, they like talking and the teacher doesn't know that you can't hear her and she just thinks you can listen when you're talking. .... 113: If you want to learn you usually have to concentrate more but some people who are not, who don't care and who are popular and everything, they don't like, really care about it. Well they probably do but they just don't want everyone else to know that. Well if you want to be responsible for your learning you should actually concentrate and look at the teacher.

114: Researcher: All right, so do you think you can do it? Do you think you are capable of being responsible for your own learning?

115: Annie Rush: Yes. (Emphatically.) (Student Interview with Annie Rush, 19-11-01)

This student exhibited an understanding of the expectations of her teachers and parents and a desire to accept responsibility for her own actions. The fact that students need to accept responsibility over their own learning attributes power to them in the classroom situation. The fact that some students choose not to participate also gives them power within the classroom. The better the teacher is at gaining behavioural control and cooperation amongst the students the more power they will acquire in the teacher/student relationship. In this case the teacher was free to choose how much power she was willing to relinquish to the student.

Outside of the classroom, in more informal settings, students were allowed to play freely with restrictions that mostly hinged around personal safety. All students interviewed were aware of the unwritten rules of decorum and treating others, as you would like to be treated. Teachers would sporadically reprimand students about their

dress or behaviour but there appeared to be no unified approach to breaches of discipline in terms of dress code. This led to some confusion amongst students who would be reprimanded for an action or breach of dress code once when they had been doing the same thing for several weeks and had not been given any warning. The students perceived apparent favouritism amongst teachers of certain students who appeared to always get away with their poor dress or conduct. This lack of a unified approach by teachers towards matters of discipline served to transfer a degree of power to the students, both inside and outside of the classroom.

There appeared to be reluctance, on the teachers' part, to hand over the power to the student even though the philosophy of middle school embraced a child centred approach to teaching and learning. One teacher, who was primary trained, expressed her dismay at this situation.

237: Ms Barter: This child centeredness, this is what I have trouble with. So often we say that we are child centred and there is no sight of a child until we're finished. ....

241: The children have no real choice. .... 245: That's why I feel for me at this stage with all the experience that I have had, that we really need to ask the person we are teaching. It doesn't matter how limited that child's experience is that's the starting point. (Interview with Ms Barter, 4-12-01)

I have thus allocated a value of C<sup>+</sup> to the classification of this relationship due to the fact that teachers did have more power in the classroom than the students but not as much power as would be foreseen with a more authoritarian and unified approach to discipline. Teachers were clinging to this power, reluctant to move it to the child as would be apparent in a truly child centred approach.

### **Summary of Classification and it's impact on Instructional Practices**

The purpose of this section is to discuss practises within the school that impacted on the instructional discourse, which in Bernstein's framework, belongs to framing issues. The seven areas discussed above; principal's views and status, parent views and status, timetabling, spatial arrangement, teacher's views and teaching team relationships, curriculum constraints and teacher/student relations all have an impact on the instructional process.

The first area of the principal's views and status was important because his views provided the framework within which the teachers could operate. Given that he was, at his own admission, influential in the school, teachers felt compelled to try to align their views with his to protect their jobs and potential for promotion. As he had a hand in the selection of staff he would try to align teachers' views with his own and where this was obviously not the case teachers were wary about the way in which they were perceived. This wariness would in turn affect the way they taught in the classroom.

The second area of parents' views and status impacted on the decisions teachers could make in the school as to their own personal style of teaching. By the principal's own admission, parents' views did have some sway in the management of the school, particularly with regard to curriculum issues. Although parents were happy to leave most curriculum based decisions up to the "professionals", and generally expressed the opinion that they were satisfied as long as their daughters were happy, they also expressed the opinion that any "experiments" with their daughters' education would have to come with "guarantees" or "you won't have the school too long". This degree of influence over the principal and school would impact on what the teachers perceived they were free to accomplish in the classroom.

The third area of timetabling although restricting teachers to a discipline-based approach left the freedom to collapse the timetable. The flexibility of the timetable was a positive step in advancing the experiments with educational styles that were in favour with the principal and teachers.

The fourth area of spatial arrangements contributed to the ability of teachers to "experiment" with educational styles with the provision of a central learning area in the purpose built middle school. However, previous buildings and insufficient space served to support a discipline-based approach.

The fifth area of teachers' views and teaching team relationships helped to promote an atmosphere in the middle school that was supportive of new teaching techniques. There was, however, some wariness about taking too great a risk due to the fact that students needed to proceed to senior school and face external examinations at the end of Year 12. All teachers interviewed, although striving to improve the effectiveness

of their teaching styles and closely supporting the middle school philosophy found it difficult to move too far from the way they themselves were taught.

The sixth area of curriculum constraints is classified as C<sup>+</sup>. The predominant use of discipline-based resources such as books and subject specific computer files, the structure of discipline-based departments with their own department heads and the perceived need to comply with senior teachers in teaching for the external examination system suggests a very strong classification.

However, all students possessed a laptop, which could be used to enhance integrated learning because of the ease of access to a broad spectrum of resources. The teachers' own knowledge base became the limiting factor.

12: Ms Manor: ... The only constraint really is expertise in terms of our knowledge of what we want, like we sort of know that this is not right or we want to change it but we are not really sure what to change it to. (Interview with Ms Manor, 7-10-01)

The additional fact that individual departments had cross-curricular teaching teams also served to weaken this value of classification, as did the actual philosophy of the middle school. This provided some freedom for teachers to depart from a discipline-based approach.

The final area of teacher/student relationships impacted on the instructional practices. The philosophy of the middle school embraced a child centred approach, which according to one teacher was not acted on in the true sense possibly due to the fact that teachers felt out of control in this situation. Teachers therefore tried to retain as much of the control as they could, reluctantly handing over a degree of control to students, especially during the integrated unit.

Each of the previously discussed categories; principal's views and status, parent views and status, timetabling, spatial arrangement, teacher's views and teaching team relationships, curriculum resources and teacher/student relationships contributed to varying extents on the instructional practices.

### ***Recognition Rules***

As discussed in the previous section, the status or power of different categories can be seen in the hierarchy of the school, in the timetabling and the facilities and

resources allocated to them. This display of power is easily recognised by individuals for whom status is part of their culture. Students who recognise the power relationships understand the culture of the school. The possession of recognition rules can be seen in people's reactions and mannerisms and judged by how effectively they navigate themselves around the space of the culture. This arrangement is largely defined by power relationships and within a school can be seen in the structure of the timetabling and the arrangement of and use made of the spaces within the school, not just classrooms and halls etc., but also in the arrangement of the subjects and the importance they assume in the timetabling.

The principal, parents, teachers and students are discussed with respect to the recognition rules they appeared to possess. In order to do this it was necessary to ask two questions.

Do the individuals interviewed understand the power relationships that led to the classification of each of the individual categories above? and

Do the individuals interviewed understand the difference between Bernstein's collection code and his integrated code and how this operates within the culture of this school?

### **Principal**

This category was also a difficult one to assign a single value to for the principal. Certainly at the conscious level the recognition rules that the principal possessed clearly indicated a strong recognition of the integrated nature required for what he would term a holistic approach to education. However, his strong recognition of an integrated code would also be influenced by his equally strong recognition of the discipline-based subjects. His view of integration lay more in the area of exposing students to a variety of disciplines and as such is not a view of integration that would lie comfortably with Bernstein's definition of an integrated code. His recognition of the concept of integration, as given by Bernstein, would possibly lie somewhere between an integrated code and what Bernstein calls a collection code. The collection code reflects a strong recognition of the power of the different disciplines. The principal possessed strong recognition of both an integrated code and separate discipline-based subject areas but his actual realisation of what he believed to be important and how to put this into practise revealed a conflict.

The timetabling provided for a flexible timetable in the middle school. This reflected the recognition of the possibility of an alternative state from that of a strict collection code and also reflected the recognition rules that the principal possessed in regard to an integrated code. The fact that the timetable was not often dissolved and when it was there were numerous difficulties and even resentment on the part of some teachers, reflected support for discipline-based subject areas.

The principal's determination to introduce the concept of a middle school and employ teachers who were passionate about the middle school philosophy demonstrated his influence in the school and his understanding of education.

I feel that he recognised many aspects of the school environment and understood that change cannot be wrought too quickly. He was aware of the parents' views and their inner conflict in accepting a discipline-based curriculum and of their power within the school. He instigated a middle school with a philosophy in line with his notion of a well-rounded education and enabled the timetable and buildings to reflect that understanding in a conservative fashion. He recognised the concepts of an integrated code and a collection code. He agreed to the formation of teaching teams in middle school and was supportive of their development in senior school for Year 10. However, he recognised the demands of the tertiary entrance examinations as he recognised that this remained an important aspect of a student's education in. He did not recognise the stress the teachers were under to cope with all of the new initiatives at the school nor the feeling of resentment harboured by some teachers towards his autocratic style of command.

## **Parents**

All of the nine parents interviewed were strongly influenced by how they themselves were taught. (These parents represented seven different girls as two couples were interviewed.) They recognised the importance of a good education and were anxious for their daughters to be successful. Many of them wanted to provide their daughters with the opportunities they felt that they never had. They were strongly influenced by the external examinations and the desire for tertiary qualifications for their children. They believed that changes to the way of teaching should be viewed with trepidation and accompanied by guarantees. They accepted that the rote learning of facts is of little importance to their children but insisted that teaching should be for success in

these examinations. They still wanted their children to develop skills relating to technology and personal development skills such as self-confidence, public speaking, an appreciation of good values and ethics and inner drive. They recognised that the school provided their daughters with greater opportunities than would be provided at a government high school and admitted that one of the reasons they chose the school was because of the strong co-curricular program and the potential for a more holistic education for their children.

While they appeared to recognise the difference between an integrated code and a collection code and expressed the opinion that they valued the skills that could more readily be developed by pursuing an integrated code, their own educational background tended to sway them to favour a collection code. Without highly structured and clearly defined discipline-based boundaries they were unable to conceive of a method of education that would be anything more than playing.

Parents expressed the sentiment that they were happy to leave the job of education to the experts and had little time to be involved in anything within the school other than what pertained directly to their daughter's education. The fact that they were paying high fees gave them some confidence that they were entitled to expect more from the school than they could from a government school and confidence that their opinion counted for something.

## **Teachers**

The teachers interviewed recognised the authority the principal held and were not overly confident of total support from him. There was strong recognition of the hierarchical nature of the school and their own place in the existing power structures.

21: Ms Barter: The mechanisms of putting forward a proposal in a school of this size seem to be quite gargantuan. By the time we've heard it and the proposal's come before us, a lot of the decisions about its going ahead have been made, or certainly OK'd by people who are further up the ladder. We are really given the proposal as a courtesy thing. That's how I feel. .... 73: I think that the decisions are made on the strategies of timetabling more than anything else because we have limited resources as

does any institution and I think timetabling those resources amongst so many is really the big limitation. (Interview with Ms Barter, 4-12-01)

At the same time they recognised the intention of the philosophy of middle school and the flexibility of the timetable and buildings of middle school. The middle school philosophy allowed them to explore the needs of adolescents and allowed them some freedom from the teaching of discipline-based knowledge in order to develop higher levels of thinking and confidence in the student. They recognised this need to impart self-confidence, real life skills and the attitude of being a life long learner.

108: Ms Manor: ... Me teaching them Bernoulli's law in Year 7 is not going to have an impact on them in Year 12. I think that as long as they've got the fundamental skills of literacy and numeracy and confidence then they can probably do anything. There's always that debate about content versus, you know style versus substance. I'm always impressed with what the girls are able to achieve. We need to as a middle school aim for the higher levels of thinking rather than it's not just a task. You know there's got to be an exploration of the thinking process and what's behind it. We need to look at that more in the middle school. ... The brain has got to be able to go from concrete to abstract, it's got to happen at its own pace, you can't force it. There is no point in making them fail algebra in Year 8 and therefore get this idea they can't do maths when in Year 9 maybe they could do it. Their ability to express their ideas, to take other people's perspectives and to read and all those sorts of things, I wouldn't be involved in it if I thought that it would be compromising their TEE. I look at the girls that I taught in Year 8, who are now Year 11 and the ones that I taught in Year 7 and that are now in Year 10 and the ones that were going to be successful have been successful, they haven't suffered any as a result. (Interview with Ms Manor, 7-12-01)

They also recognised the fact that many senior teachers were not supportive of the efforts of middle school nor did they appreciate the disruptions to their classroom time that collapsing the timetable could cause.

376: Ms Manor: The whole point of going to a secondary school is so that you get a specific content knowledge. ... That was always the point. That was the point of doing it because at the end of it you've got those exams and to be perfectly honest I'm not necessarily sure I want to stir up senior school people any more than we already do. By our mere presence they'll hate us. You know, we dance around and they don't learn anything and when they get to Year 10 they have to learn things. It's an interesting way of looking at the world (integration is), but I don't necessarily want to stir them up any more. In senior school they learn things; down here they don't really learn anything. (Laughter). (Interview with Ms Manor, 7-12-01)

It was strongly recognised that senior teachers largely felt that anything detracting teachers and students from the business of preparation for the external examinations was a waste of time. Yet there was recognition that the senior school science head of department was supportive of new initiatives in middle school.

They recognised that parents were interested in having their children taught the basic skills of reading, writing and mathematics together with other social skills of confidence, public speaking, presentation and values. Parents did want their children to be successful at school and this was judged by their performance in the tertiary entrance examinations.

100: Ms Manor: I think that there will always be that cocooning within a school environment because ultimately this Year 7s are going to be doing their TEE at some point, whatever form it is in. So there is a tendency for that to override. (Interview with Ms Manor, 7-12-01)

They were also aware that parents' views carried considerable weight and that some parents had the ability to cause trouble.

They did have difficulties in carrying out the child-centred approach that was favoured by the principal and a major impetus of the middle school philosophy. One teacher interviewed was aware of this problem and recognised that much of the learning in middle school was done to students rather than allowing students to take on the responsibility of their learning. Teachers did try to create a student-centred

approach but were reluctant to allow the students to have a voice in the structuring of their curriculum. This was even apparent in the integrated unit where, although students were allowed to proceed with their work with minimal guidance, a very structured plan was provided, as it was felt that they would be unable to do this for themselves.

The teachers' recognition of what they could successfully accomplish in an integrated unit had been moulded by three years of teaching the unit. Each year had seen modifications to the unit. Initially it had been conducted as a thematic approach within the individual subject areas. The next year it was changed and the timetable collapsed to allow the girls to work on it across all of their core subject areas instead of within each separate classroom. This was the year I observed one class as my pilot study.

The next year, which formed the basis of my data collection, the unit was run across all four, core subject areas but the teacher modified the tasks to make them more structured and to reduce the time spent in writing the story that the trial was to be based on. The teacher in charge wrote the story herself to eliminate difficulties with insufficient girls being involved. She also developed a plan to keep the girls on track and created more individual discipline-based folders on the school web site for the girls to take their instruction from and to enable them to work at their own pace.

(Taken from interview data found in Interview with Ms Manor, 12-10-01 (278)).

This teacher when interviewed (Interview with Ms Manor, 12-10-01 (360)) commented that years of experimenting with integration had led her to believe that the most workable approach was to use a unit of integration as a method of bringing together skills and content that had been learnt in separate discipline-based areas of study. She had, over the years, come to the opinion that students did not learn the required content matter as well when left to their own devices, as in an integrated structure, as compared to being instructed within a discipline-based subject area.

364: Ms Manor: We've learnt that if you want them to learn content then stick in the classroom and away you go, but if you want them to culminate, to extend, to expand from that then that's the best time to do your integrated unit, at the end. (Interview with Ms Manor, 12-10-01)

An examination of the framing of the instructional discourse of the integrated unit reveals her preference for a discipline-based structure. She considered this unit to be a capping stone to previous work done in a variety of discipline-based subject areas drawn together in a practical way.

400: Ms Manor: We are adults, we can see the complexities of it, the depth and the extent of a question, whereas they are only kids who have a limited number of experiences. They don't know very much. Although they probably know a lot of things that we don't realise they know there is still a limit to their capacity to do it. They still need to be directed. For instance, when I did the survey question, "Is crime a problem in our society?" you could just use that to draw in all sorts of things but at some point you are going to have to direct them to where to go, to what to do and how to look at the problem from a social studies perspective, from a science perspective, from this from that. .... 408: If you want to do a really good job of doing that sort of thing (integration), you have to have the time and the resources to do it. I could whip up a really new, fantastic, integrated, problem solving unit but I'd only be able to teach one class and I would spend all of my time on that, and the learning experience would be fantastic but there is noway I can teach a full teaching load and do that. There's just noway you can do it. So this is our compromise position. (Interview with Ms Manor, 12-10-2001)

Teachers recognised that although the philosophy of middle school gave them considerable flexibility in their approach to teaching, other factors served to limit what they could expect to do. They possessed the recognition rules of both an integrated code and a collection code and strongly recognised the hierarchy of power in the school. They also had a preconceived notion of the purpose of schooling, developed from their own education, and managed to justify the learning of content knowledge.

376: Ms Manor: I don't know that you could necessarily do it (teach) differently and I don't know if you would want to do it differently. Like are you doing it differently just for the sake of it? The whole point of going to a secondary school is so that you get

a specific content knowledge. .... 380: That was always the point. That was the point of doing it because at the end of it you've got those exams and to be perfectly honest I'm not necessarily sure I want to stir up senior school people any more than we already do. By our mere presence they'll hate us. You know, we dance around and they don't learn anything and when they get to Year 10 they have to learn things. It's an interesting way of looking at the world, but I don't necessarily want to stir them up any more. In senior school they learn things; down here they don't really learn anything. (Laughter).

(Interview with Ms Manor, 12-10-2001)

## **Students**

Students generally appeared to have very good recognition of the rules governing the hierarchical nature of power relationships within the school. They recognised clearly the differentiation between the types of behaviour required in class, assemblies, Chapel and their own free time. They clearly recognised the difference between science classes and other discipline-based classes but had difficulty in recognising the specialised language of science. The science teacher tried to restrict her use of scientific language to the recipe for the writing up of experiments and the use of some specialised words, which were given to the class in the form of a spelling list and used by the teacher in the talk of the classroom. Most students did not recognise the complexities of an integrated code or a collection code but did have some recognition of generalisations pertaining to these two codes.

All of the seven students interviewed appeared to have a good basic understanding of the rules and regulations of the school and knew how they were expected to behave in any given situation. This is seen in the answers students gave when asked how teachers expected them to behave in class at the end of the day.

35: Andrea Vince: They expect you are going to be a bit rowdy because it is the end of the day but they still expect you to keep up your politeness. (Student Interview with Andrea Vince, 22-11-01)

58: Jane:                They still expect us to work pretty hard but they do expect that we're getting tired, that we won't do as much work and we'll probably start packing up early. (Student Interview with Jane, 20-11-01)

Students were also required to carry their school diary at all times, although many did not. Teachers were not consistent with disciplining students for this breach of school rules. As a result students discovered that they could often get away with ignoring school rules. (Taken from Introduction to Forensics, 16-10-01) Teachers were unaware that their inconsistent discipline was encouraging students to do what they did not want them to do.

Students clearly recognised the hierarchical structure of power in the school and challenged this from time to time in a limited fashion.

16: Teacher:            ... Your job is going to be to take the script that we used last year and change it to suite the story for this year.

15: Girl:                Do you mean last term, you said last year? We weren't here last year. (Taken from Introduction to Forensics, 16-10-01)

In this example, the student was not afraid to challenge the teacher by pointing out her apparent error. Many other students were possibly thinking the same thing but were reluctant to ask for clarification. The student could have worded the question in such a way as to state her misunderstanding and ask for clarification but she chose to challenge the teacher by putting her question in such a way as to point out the teacher's error. In fact, what the teacher had said was correct, she had simply not realised that the students would not know what she had done with the class in the previous year. Instead of directly rebuking the student she elected to continue to explain what she did last year, making no reference to the question. The teacher turned the student's challenge into an insignificant event but used the knowledge she gained to enhance her explanation without interrupting her flow of dialogue, thus maintaining the upper hand in the struggle for power.

Students also were aware of what it meant to be responsible for their own learning. This recognition contributed to the smooth flow of lessons.

136: Jane: It means that you have to listen and try hard. Like if you're not listening, that's your fault not the teacher's and if you don't learn and you don't try hard it's your fault, not the teacher's. They take you as far as they can take you and you've got to take yourself the rest of the way. (Student Interview with Jane, 20-11-01)

112: Emelia Stammer: And then they say, 'study this 'cause you've got a test tomorrow, and then we study it as much as we want to study it, because we are responsible for our own learning and then, if we don't study then we'll get a poor mark for the test. (Student Interview with Emelia Stammer, 20-11-01)

The students' recognition of their teacher's reasons for conducting different types of lessons was recognised to different degrees by different students. Some students recognised some of the reasons quite well.

146: Jane: Probably so we can do stuff on our own, so we can see what it's like. Not having help from the teacher and so that we can see what fun it can be. (Student Interview with Jane, 20-11-01)

While other students had more difficulty in recognising the teacher's intent.

179: Researcher: Do you think that you have learnt things by doing the forensic science unit that your teacher would not have expected?

180: Emelia Stammer: Oh I got used to doing graphs in the survey.

181: Researcher: So do you think your teacher would have expected that, or at least hoped for that?

182: Emelia Stammer: I'm really not quite sure. (Long pause.) No, I don't think she would have expected me to learn more about graphs, she might have expected me to learn about forensic science because you need to learn your graphs to be a forensic scientist. Maybe she would have expected us to practise on our graphs, 'cause I've got used to my graphs now. .... 186: She would have expected us to learn how to dust for fingerprints; I did learn how to dust for fingerprints, all the main things when you are a forensic scientist. (Student Interview with Emelia Stammer, 20-11-01)

Some students either didn't recognise this at all, couldn't be bothered thinking about an answer or lacked the vocabulary to explain what they were thinking. Two of the students interviewed simply replied, "Don't know" when asked what the teachers' reasons might be for having the integrated unit.

Some of the students recognised the differences in the type of language employed from one discipline to the next whilst others felt that there was no real difference. When asked about the specialisation of the language required for science one student replied

138: Debbie Stone: Yeah, um science is always a meaning to everything. There's always another meaning, say you talk about something and there's always another meaning. In maths, it's pretty simple, you just explain stuff and there's always simple rules to everything.

139: Researcher: What about the types of words used in science and English and maths and SOSE? Are there a lot of new words that you have to learn?

140: Debbie Stone: Mainly in science. You have to learn a bigger word. Every lesson has bigger words. (Student Interview with Debbie Stone, 23-11-01)

Students did recognise the difference between the integrated unit and the discipline-based unit in terms of the instructional discourse.

166: Jane: ... When we were doing the (integrated) project they expected us to do a lot by ourselves and our other teachers weren't there for us. Now in 'Above Our Heads' we've got all this information for it. That's already there waiting for us. When we had to do (the Integrated) forensic science (Unit) we had to find most of the information and do it by ourselves. (Student Interview with Jane, 20-11-01)

The students could also identify the knowledge required from the different disciplines that was needed for the integrated unit. They recognised the different types of learning as belonging to various discipline-based areas of study (Documents entitled Self-Reflection, see Appendices J and K). They identified the discipline-based unit as consisting mainly of science.

204: Debbie Stone: 'Above Our Heads' is mainly just science. It's not all those things put together and it's not fun. (Student Interview with Debbie Stone, 23-11-01)

The following quote from a student interview shows that this student strongly recognised the intent of the integrated unit and also recognised the character of other students that hindered them in their own role. This student struggled with her written work as she was mildly dyslexic, but managed to develop a considerable degree of insight, which allowed her to clearly recognise the culture of the school, the expectations of parents and teachers and the characters of other students that could help or hinder her in her efforts to be a good student.

118: Researcher: OK, why do you think your teachers want you to do the forensic unit?

119: Annie Rush: I think because it is practical, you know, with all the court cases and everything. The teachers wanted us to learn more about it, like 'cause in science we usually do experiments but this is like going a step further to like, it helps you if you do it, like oh. (Breaks away unsure of how to explain further.)

120: Researcher: You're doing very well.

121: Annie Rush: (Giggles.) They want us to do like practical stuff so we learn it like half by ourselves and half by the teachers. So they help us by doing more practical work because, um, the forensic unit has been really good because it was like you could, you do it all by yourself, they just say you've got a time limit while you're here and you have to learn all about it and you have to research it yourself.

122: Researcher: Ok, so you were responsible for doing a lot of the work yourself?

123: Annie Rush: Yes, and some people, um popular people, were like um they knew that they didn't get any help so they had to do it individually and they actually got something done.

124: Researcher: Ok, so they might not have done anything normally 'cause they could copy it off someone else?

125: Annie Rush: Not necessarily. Some people are really responsible but some people just don't concentrate all that well. (Student Interview with Annie Rush, 19-11-01)

In general, students appeared to have quite strong recognition of the elements that would guarantee their success as students, something that Bernstein feels is denied those of lower socio-economic classes and retained for the privileged. It was possible to see this manifested to varying degrees in some students whose parents' backgrounds were more from the working classes. They could clearly recognise the nature of the power involved in the hierarchy of the school but did not recognise classification of the views relating to integration and discipline-based approaches to learning.

## **Conclusion**

This chapter made use of Bernstein's framework to come to a better understanding of the culture of the school. Seven categories were examined under the heading of classification; principal's views and status, parent views and status, timetabling, spatial arrangement, teacher's views and teaching team relationships, curriculum constraints and teacher/student relations and allocated different degrees of classification depending on my interpretation of the power relationships in the school. The classification of these categories influenced the instructional discourse, which provided the framework for the enactment of classroom lessons (see Chapter Eight). Teachers are not at liberty to do whatever they want in the classroom but must operate within parameters that are determined by the power relationships within the school. Different teachers will react differently to these parameters depending on their status within the school and their own cultural identity.

Following the summary of the classification issues a description of the perceived recognition rules that the principal, parents, teachers and students possessed was given, addressing two questions.

Do the individuals interviewed understand the power relationships that led to the classification of each of the individual categories? and

Do the individuals interviewed understand the difference between Bernstein's collection code and his integrated code and how this operates within the culture of this school?

The data revealed that most participants had very strong recognition rules. Something that Bernstein believed we all have irrespective of social class. The principal, parents and teachers had strong recognition of Bernstein's collection and integrated codes and exhibited a pluralism of views in terms of classification that led me to identify a tension between integrated units and discipline-based units in the middle school.

This chapter provided a detailed focus for situating the Integrated Forensic Science Unit and the discipline-based unit entitled Above Our Heads in. An examination of the culture of the school using Bernstein's framework has provided a better lens with which to view the two units.

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## **Chapter Six: The Integrated Forensic Science Unit**

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### **Introduction**

In this chapter I present a descriptive account of the Integrated Forensic Science Unit. I provide background to the unit including the teacher's preconceptions of the unit and what she did in preparation. This is followed by a brief chronology.

This chapter includes an in depth discussion of the teacher's mannerisms and actions involved in the presentation of the unit. Also presented is the perspective of some of the students. These data will form the background to the analysis.

A brief conclusion is provided, drawing together the data from the different perspectives and incorporating the original objectives of the unit.

### **Background**

In this study I was a participant observer during the teaching of an integrated unit of work and a discipline-based unit of work in science. Both of these units of work were taken by the same teacher and involved the same group of Year 7 students. The integrated unit was to be conducted during the first two weeks of term four, consisting of a total of 29 lessons, each of 50 minutes duration. The science unit called, Above our Heads, continued on from the end of the integrated unit to the end of term and consisted of 22 lessons commencing the 30<sup>th</sup> October 2001 and finishing on November the 30<sup>th</sup> 2001.

The integrated unit was called The Integrated Forensic Science Unit and was referred to in this way by the teacher and on the web pages used to disseminate the instructions. I observed the Year 7 Level Coordinator teaching this unit to a group of

26 girls. At the same time the three other teachers who were members of the Year 7 Teaching Team assisted three other classes to complete the same tasks. The members of the Teaching Team were the four core subject teachers of mathematics, science, social sciences and English. All of the girls had access to any of these teachers for assistance during the course of the unit and all four groups worked in close proximity. Three of the groups were in classrooms on the ground floor of the middle school and the fourth group, which I observed, worked in the central learning area. The science teacher who would normally conduct lessons in the laboratory, which was located quite a distance from the middle school, taught this group. The location for this group was not ideal as the central area was open to girls walking through from class to class and could become quite noisy at times. It was, however, close to the other three classes and the teachers who could help with various aspects of the unit. The girls much preferred being in this central area, as they did not need to walk the extra distance to the science laboratory with their laptops and books.

I commenced my observations at the beginning of term four, 2001. All three of my daughters do or have attended the school and I observed the unit in the preceding year. Hence, I was reasonably familiar with the school environment and knew many of the teachers and students.

In preparation for my study I conducted some casual observations of the integrated unit in the previous year. At this time, the girls were divided up into groups of three or four and asked to write a story involving a crime. Whilst writing the story they prepared a box, which consisted of any evidence that lawyers would need to present in court as proof to build a case against the suspect. Each group was asked to make a PowerPoint presentation of their story and the class was to vote on the story they felt most suitable to take to trial. A script, based on the story voted for, was to be written for the trial and acted out and a verdict arrived at by a jury, consisting of girls from a different class. The verdict would hinge on the evidence and case built in the court scene. The girls were given two weeks to complete the tasks, at the end of term three. They had all of their timetabled lessons in science, mathematics, social sciences and English in which to complete the unit. I observed some social difficulties amongst the students and the teacher spent a great deal of time mediating between arguing and crying girls. The teacher told me that she planned to make some changes to the unit in the following year to avoid this kind of conflict.

## Teacher's Views and Plans

For the main study, I interviewed Ms Manor, the teacher in charge during the school holidays before term four commenced, which was when the unit was due to start. I asked her about her impressions of the integrated unit in the previous year and what changes she intended to make. This teacher was very active and assertive about her opinions within the school. Others seemed to be willing to follow her lead and to leave a lot of the basic groundwork up to her as they respected her capabilities.

Ms Manor told me that the unit I was to observe would be different from the unit I had observed in the previous year. It had been moved to the beginning of the last term instead of the end of term three to allow for extra time if the teachers found they needed it. This would provide for the possibility of extending the unit as Ms Manor had been pressed for time to complete the work and allocate valuable time for reflection. The other teachers expressed the view that extra time was not necessary. In Ms Manor's words

31: Ms Manor: One of the changes we've made is instead of trying to fit it in to the end of term, like we did last time and then we ran out of time, we decided to do it at the beginning of this term instead, so that if we need another couple of periods to do the reflection and the processing afterwards, we can do that, which we didn't have time to do last time. So we put it at the beginning of this term, and that gives us a little bit of flexibility to extend it if we need to. (Interview with Ms Manor 12-10-2001)

The unit had also been subjected to a major re-write where instead of requiring students to write the crime story this aspect of the unit had been done for them in the hope of reducing a source of major social difficulties, as in the previous year.

35: Ms Manor: Although writing stories I thought was great from that perspective of getting them to work together and you know the English side of it, I thought it was just a fraction stressful for them, to try and do that. Because writing a story's not easy anyway, writing a story with a group of people was the source of our conflict, so this time I've written a story for them, but I've made it so that there's a lot of the integrated things, there's much more integrated aspects of it I think this time, as a result.

(Interview with Ms Manor 12-10-2001)

By providing the story herself she hoped to allow extra time for the students to involve themselves in all the other aspects of the unit thereby allowing it to contain a better balance of each subject area and making it more integrated. In addition the science teacher booked the middle school learning centre for her class instead of having to teach them in the science laboratory. This move would also allow her to be closer to the other classes where she could keep a better eye on what was happening and be more readily available to offer assistance.

### **The Lead-Up to the Unit**

Term three had seen a lot of work being done in the individual subject areas in preparation for the Forensic Science Integrated Unit. In the previous year I had stepped in as a relief teacher for a week of the forensic science unit, which preceded the Integrated Forensic Science Unit, where the students had looked at the different ways of collecting evidence and the interpretation of fingerprints and chromatography etc. and so I was already familiar with the content. In English the girls had discussed and practised writing character profiles. In SOSE they had looked at the courtroom and court proceedings and the roles of the different officials and also map reading. In Mathematics they had been working on tallying and graphing and interpreting graphs.

Term four, when I was to commence my observations of the Integrated Forensic Science Unit, started with an unplanned interruption. Assembly went overtime, meaning that the teacher's plans for the morning had to be altered on the spot. As I had witnessed before, she took it in her stride and had another plan worked out in advance. She had all the girls notified before they went to assembly of an alternative plan, just in case of such an event.

### **Overview and Chronology of the Unit**

Ms Manor gave an overall introduction to the unit for the first lesson where all four, year seven classes came together with their teachers in the middle school learning centre. She informed the students of the tasks that were expected of them and gave them the overview that they would need if they were to make sense of the unit. The girls then split up into their classes and returned to the classrooms with their teacher where they remained for the full two weeks.

Each day they had at least one lesson working on this unit and at most five lessons. On average they had 3.3 lessons per day for nine days. The teacher spent the first five lessons “organising the girls into their roles and explaining the responsibilities and deadlines for the next two weeks.” (Field Notes dated October 17<sup>th</sup>, 2001, Reflection.) She insisted that they keep a plan of what they had done and what they needed to do and that they would be responsible for organising this for themselves. This plan was to be part of the work that they were to submit. Frequently, throughout the two weeks she would make reference to the plan to remind them of how best to organise themselves. Some students were required to write the script that would be used for the trial, coordinating the manufacture of the evidence to be used in the trial. Others would act as witnesses in the court proceedings and were required to write character profiles. Still others were to produce newspaper articles about the crime.

Most students also had to complete a separate survey about crimes that people had experienced. They then were required to produce a report, an example of which had been provided for them, including graphing their results using Excel. This survey and graphing was to supply a mathematical component to the unit where students used the previously learned skills of tallying and graphing. All students, except those involved in writing the script, were also required to complete various mapping exercises which tested their ability to use initiative, follow and read instructions related to map reading, investigation and inference. The students were also asked to crack a code which had been used to send secret messages in the story and could be important as a piece of evidence in the trial.

The only deadlines that they were given was that the mapping exercise was to be completed by the end of the first week because they would be going out on the school bus to follow the route in the second week. The trial was scheduled for periods three and four on Friday 26<sup>th</sup> October 2001 with a dress rehearsal, the day before during periods three and four.

After the intensive organisational period of the first five lessons the structure of the unit became much more relaxed with the girls working individually or in small groups, going on with what they needed to do to be ready for the bus trip and the trial. The teacher was mindful of the need to keep girls working and so would call for attention once or twice a day to go over problems or ideas and to keep everyone on track. Walking into the room on any of these days you would be confronted by, what

would best be described as a hive of activity. Girls could be observed working on mapping exercises, surveys, a coding activity, newspaper articles, character profiles and there was always the group of four students seated in an alcove off the main area quietly working on the re-write of the script. There were always a few girls daydreaming, playing games on their laptops or having a social chat within this hive of activity. There were, however, a variety of activities that they could swap around to relieve boredom and they were never required to sit still in the same spot for the entire time but could move around freely to exchange ideas.

On the Monday of the second week the girls went off in the bus as part of the mapping exercise. The teacher had never been sure of the exact timing for this trip and was taken by surprise when the teacher responsible for taking them out arrived to collect them. The girls had been presenting their character profiles to the class and were in costume for the occasion, so were unprepared to go out on an excursion. Some had to go teetering in high heels, which meant that they would have to remain on the bus instead of being involved in the walking part of the excursion. They had been told of the timing in their social science lesson before the end of the previous term but everyone had completely forgotten. This was the first group to be taken out on this part of the unit and, although they had all completed the mapping activity, they were generally unprepared because of the abruptness of their departure.

The girls worked hard for the rest of the week to finish their commitment to the trial and they held the dress rehearsal during periods three and four on the Thursday of the second week as planned. There were several difficulties, especially for the girl acting as defence counsel, and a lot of work to be done before the actual trial the next day.

The unit was to end in the same manner as the previous year with a trial but this time a jury from the same class would be used instead of coordinating different classes. The unit finished as planned with periods three and four being devoted to the trials for each of the classes held separately. The jury had sheets given to them from the teacher asking if certain points had been satisfactorily proven during the trial and then requiring a decision from the girls as to the guilt or innocence of the accused. In this case the accused was found guilty and the judge remanded the prisoner for sentencing. The teacher questioned the girls to guide them on an eight-minute exploration of what they had learnt over the previous two weeks. Interspersed with this guided, reflective questioning were plenty of positive comments about the

students' work. At the end of this questioning period she handed out two pages of questions entitled Self-Reflection (see Appendices J and K), for the students to complete, which asked them questions about their learning for this unit. The unit culminated in period five, when all of the classes came together in the middle school learning centre for an awards ceremony where certain girls were given special certificates noting their exemplary contribution to the unit. Each teacher awarded five or six certificates for things such as the student's contribution to writing the script, their tenacity in breaking the code, their quiet determination to complete all of the work etc. This final meeting was very informal as girls and teachers sat around, on the floor, congratulating each other. There was no other formal form of assessment for the unit of work but the students did a Forensic Science Test in their next science lesson to assess their understanding of the work they had done in the science-only lead up to the Integrated Forensic Science Unit. All students did exceptionally well in the assessment.

## **The Unit in Depth**

This section is presented to enable the reader to be immersed in the data and visualise the proceedings of the unit.

### ***The Teacher***

The case study began when I interviewed the teacher prior to the commencement of the unit. Her conceptions about the unit and the educational experience that she was hoping to provide for the students were reflected in the way she went about conducting the unit. Earlier held beliefs or expectations must have also impacted on her level of interaction with the students even though she may not have been aware of these. In an interview, the year before, she revealed to me that she was always wary of the impression the senior science teachers would have of her ability as a science teacher, in particular her ability to teach sufficient content knowledge. Her objective for the unit was not to necessarily increase content knowledge, although this would happen incidentally as the students researched in the mathematic and social science area of the unit. Rather, she wanted to provide an opportunity for the students to practise skills they had already learnt in their individual subject areas and to draw on these skills from different areas to complete the unit. She was hopeful that they would deepen their understanding and have the opportunity to experience the

interconnectedness of the concepts and skills from different areas of study. In response to the question, “what do you intend the students to learn from this unit conducted in this manner, that they will be unable to learn in a more traditional manner”, she replied,

119: Ms Manor: They’re not necessarily increasing their knowledge, by applying their knowledge they’re deepening their understanding of it. And I think it’s also about them working together, and applying what they’ve found out. ... What it’s about is taking what they’ve done already and applying it in a different way to consolidate what they’ve learnt. ... If we were sitting now in our respective classrooms, then you would take a much more content orientated view of it. Where as this way, it’s about handing it over to them, and you watching what it is that they’ve done. And it’s seeing them actually concretise what they’ve been doing in their separate classrooms. ... So it’s the application rather than them actually learning new things. They’ll consolidate what they’ve learnt, and they’ll realise that they can do a lot more than they’ve probably thought about. Or they’ll discover that there are things they need to learn how to do ... they’ll learn incidental things, but it’s not about them necessarily increasing their knowledge in this particular [area]... (Interview with Ms Manor 12-10-2001)

Her belief that the students would not understand the importance of bringing knowledge from different areas together for themselves encouraged her to plan to talk about it in her introduction to the unit.

95: Ms Manor: When I’m doing [the] introduction, I talk to them about the fact that you know this is an integrated unit, and what this means and how I want them to think about how all these things tie together. (Interview with Ms Manor 12-10-2001)

In fact, when she actually got in front of the combined classes to introduce the integrated unit, she failed to mention the interconnectedness of the subjects and the need to draw on a number of areas in order to complete this unit. She merely mentioned the mechanics of being in the same room for mathematics, science, social science and English.

6: Ms Manor: We are about to embark on our new topic which is an integrated unit, so it is a special type of unit because you are going to be staying with, sorry, in the one classroom with the same people all the time for your maths, English, social studies and science classes. And you're going to be creating this trial that will happen at the end of next week. So I'm going to show you all of the bits and pieces that go along with it, in a moment. But basically for the next two weeks you won't be going to your various classes Maths and English, SOSE and science, you will, in fact, just be staying in the one room. (Introduction to Forensics 16-10-01)

From the teacher's perspective, the organisation of the unit varied as the unit proceeded and the demands on her time and knowledge changed. Initially she gave instructions, relying on a lecturing style of communication with the class. Once most of the instructions were given and students set on the path they needed to follow her presence was required to keep students on track, supply information about procedures or equipment or to act as a facilitator or guide to ensure everything was addressed. Occasionally she was called upon to act as a disciplinarian when students became a little unruly or disruptive. As the unit came to a close her role changed back to that of instructor and organiser, ensuring that all tasks had been completed and setting dates for the final dress rehearsal and trial. After the trial she guided the students through a self-reflective moment where they thought about what they had learnt in the unit. Her very last act, as teacher for the unit was to publicly acknowledge girls for their efforts and to provide an informal assessment. In order to elaborate on these changing roles of the teacher throughout the two weeks I will draw upon descriptive data from early lessons, somewhere in the middle and at the end of the time so that the teacher's role can be examined in relation to the chronology of the unit.

Before the unit began the teacher worked very hard at putting a number of documents on the school intranet for the students' use. They were able to download these documents and use them as guidelines for the different phases of the work. Hence, the teacher's main objective when first meeting with the students, was to inform them about these documents. She grouped all of the four classes together and gave them an overview of the entire unit using her own laptop projected onto a

screen so that the students would see the same documents when they commenced to download the material themselves and recognise each of these documents that she had drawn attention to. This has been covered in the section entitled “The Students’ First Encounter” with the unit in Chapter One. At the end of the first day the teacher read the story, entitled Aunt Mimi and the Swami, to the girls and asked them to highlight any important pieces of information, on their own document, as she came to it, for their reference when they were trying to put together the evidence.

42: Ms Manor: I’m going to read and I want you to follow as we go. Now, what I want you to do is I want you to think about the fact that you are trying to find the evidence that you need to find that person guilty of fraud. So we’ll read the story together first. If you see any important pieces of evidence as we go or things that you are going to need to find out about then highlight it. OK? So I am going to sit here now and read it to you, I want you to follow and find the evidence as we go. (Introduction to Forensics 16-10-01)

Not a single girl did this highlighting and during a short break I questioned them about the instructions the teacher had provided. Some girls were so engrossed in the story that they forgot about any other instructions but several were aware of what they were asked to do but were having difficulty knowing just what to highlight. I mentioned to the teacher about the lack of response to her instructions before she continued but she was not very concerned about it and remarked that it was typical behaviour. She was hurrying to get through reading the story before the end of the day. It was quite noticeable after she recommenced reading that a lot more girls were trying to highlight information and were more involved in the story. The girls were instructed to be familiar with the story when they came to school the next day, as they would be deciding each individual’s role for the following two weeks. Up to this point the teacher had predominantly given instructions, expecting the girls to follow. In the second encounter, the next day, the teacher was on her own with just her class and she organised the students and the information she wanted them to process. This second encounter spanned three lessons, the first one before recess and the next two sandwiched between recess and lunchtime and commenced almost ten minutes late with the teacher giving yet more instructions. Some girls used their initiative and

booted up their laptops and started looking through the documents that they had downloaded the previous day. Most chatted as they arrived late and did not try to get themselves ready for work. The teacher commenced with more instructions and a little discipline.

4: Ms Manor: All right, now is everyone on their purple page? On the document that says 'Your Instruction'? So get to the purple page, which is 'Your Instructions'. So you go to your folder that you downloaded yesterday, you'll find in that Forensic Science Integrated Unit Folder, a Word Document called 'Your Instructions' and that's your purple page. Now today we need to decide who's going to do what. OK, shhh! Don't get too excited. Now, I'll go through the roles of each of the people, so you can see how much work there is. Remember, everyone gets to get dressed up; everyone has an important role to take, OK, so you can't all be Aunt Mimi. All right, you can't all be the crown prosecutor. If we have say three or four people who want to do the same thing, then they will need to disappear off and we'll and then we'll discuss who we think will do the best job and then we'll vote. All right? So think very carefully about it. Now is everyone on the purple page? (Second lesson, Forensics 17-10-01)

During this period of the unit the teacher's role changed subtly from that of giving instructions to one of acting as an advisor, facilitator and at times an arbitrator. She still had centre stage and did most of the talking but instead of giving a list of instructions to follow she began describing the roles that the girls could assume and advising them about the type of work required for each role.

22: Ms Manor: Now remember, you also have to conduct a survey, you have to do the mapping, you also have to fill in your plans and do your diary stuff and all those sorts of things. So there are other jobs that you also need to be able to do, so don't take on too much. So have a think about that now as to what you want to do. ... If you haven't read through the script yet then I would be very reluctant to stick my hand up unless you know what you have to do. (Second lesson, Forensics 17-10-01)

She asked girls what role they would like and if there was only one person wanting to do it. Then she gave the role to that person but if more than one student wanted the role then she oversaw voting, which was used to determine who would get the role. The girls involved were asked to leave the classroom for a few moments while the voting took place. This usually worked out to be a popularity vote but sometimes the teacher used her power in the classroom to decide the outcome rather than sticking strictly to the voting procedures.

67: Ms Manor: And the last one, Michele Jordan? We've got Casey, Annie Rush, Lauren and Jane. Ok, scoot a minute. (Girls involved leave the classroom.) All right now the lawyer (Michele Jordan) is the last one. The lawyer has to be professional; they have to be very serious; they have to be someone who is going to carry off that role effectively. All right, so have a picture in your mind of what a lawyer is like. Got to be fairly quiet and studious. So from that list, Casey? Liz? Annie Rush? Lauren? Jane? Hmmm, I'm going to have a casting vote here. I'm going to give it to Liz. Yeah, I think I'll give it to Liz 'cause I'm going to have the decision for the final one. Ok, so we've got all those people. (The girls come back into the classroom) ... Ok, I made the final decision which is I'm going to have Liz for that one. So I've chosen. (Second lesson, Forensics 17-10-01)

This deviation from the democratic process was a source of concern for one girl interviewed, discussed later under the title of Jane. Once the roles were allocated the girls went out to recess. On their return to the classroom the teacher started back in with more instructions and some praise for one girl who was often not paying attention but in this instance was showing initiative and proceeding with her work.

90: Ms Manor: Go to your purple page, "Your Instructions". Now, what you need to have done by the end of this week is the mapping exercise. .... You also need to write a character profile for your particular character. The judge, the associate and the two lawyers need to write the script. Everyone else either needs to be working on the evidence, the press clippings, the survey. So we are now going to sit down and work out what you are going to do when, who with, all that sort of stuff. So go to your purple

page and I think the first thing we can do is you can look at the character profiles. Just like Wilma has done, she's gotten on to the character profiles link and she's made that work so she can read through what she has to do now. (Second lesson, Forensics 17-10-01)

It was at this point in the unit when the teacher's role changed most, from mainly giving instructions standing out the front to moving amongst the students and answering questions or pulling all girls together and addressing the class as a whole. She also acted as a friend on the girls' own level at times and would laugh and join in a conversation as if she were one of the students. On one occasion she acted as a friend and adviser to one student whilst, at the same time, helping another student with a problem with her laptop. This type of multitasking behaviour from the teacher was seen frequently throughout the middle section of the unit, after most of the instructions were given and before the need to wrap up the work for the final presentation.

Adopting this attitude also made it possible for her to spend more concentrated time with the four girls who were chosen to write the script for the trial. The following excerpt shows the teacher's early attempts to involve these students in the decision making process and not to simply dictate how the script should be written.

Ms Manor:           That's right. Now the defence is going to rest on the fact that you can't prove that the Swami and Henry are the same person. So you need to prove in fact that Henry and the Swami are in fact the same person, that's the important thing for you. The defence people are going to say, "Hey it's not true" and they are going to try to discredit the expert witnesses and all that. So that means that we need to get a decent amount of evidence to show that in fact Henry and the Swami are the same person. The jury will decide based on how well you guys ... and how well people answer. On the day they are going to make a decision based on the evidence and all that sort of stuff. Because remember we're not telling them what they are going to say. So what evidence do we need to decide that Henry and the Swami are the same person?

Student:            It could be that hair stuff.

Ms Manor: OK so we need some red hair. Where is the red hair going to be that proves that Henry and the Swami are really the same?

Student: On the brush?

Ms Manor: On the brush and?

Student: The wig.

Ms Manor: On the turban and the wig because what the Swami's dressed up in is see he's got a special wig on so you can't see his red hair, he's got the turban and all those sorts of things and he's hidden it in his dressing room at the theatre. So we need to get hold of those things. So we need a turban, we need a wig, we need red hair, so we need those three things, labelled A, B, C.

Student: What's a turban?

Ms Manor: It's your decision, you have to find out what a turban is if you don't know, you have to find out what we are going to use for it, so it is your decision, you can work it out, I'm not going to tell you. That's the first thing you need to do, what else do we have to do? (Transcribed from tape labelled 18<sup>th</sup> October 2001.)

Ms Manor did try to point out the importance of the evidence in linking Henry Posley and the Swami and how this would be used in the trial to cast doubt on the fact that these two people were one and the same. However, I have no data indicating that the teacher did this one-on-one with the Defence Attorney, Claire Beck, for whom it was most important. The Crown Prosecutor, Anna, picked up on this information quickly and was able to use it in her case. Anna had the advantage of being able to discuss what she was doing with her father who seemed to be a big help to her developing understanding and the appropriate realisation rules. The following is a transcription of Anna trying to explain to Claire Beck how to write her questions, when the teacher was not present.

Anna: Remember, you can't lie but you can ask the question so that you're telling the truth but you're not telling all of it. This is what my Dad told me last night. You have to say the part of the evidence, which casts doubt. You can say, "What did

the Swami say when you first entered the séance?” and if she can’t remember you can say, “Well you mustn’t have been there.” That’s just an example; it’s not a good question. (Transcribed from tape labelled 19-10-01-The four scriptwriters with the teacher.)

The trial was considered by the teacher to be the most important part of the unit and therefore warranting her attention more than other aspects. During this time the teacher was often working together with the four scriptwriters whilst the majority of the class proceeded with their work quite independently. She would speak to the class as a whole, reminding them of deadlines or opportunities for printing, usually things of a procedural nature, and then leave them to continue on their own while she spent time ensuring that the script rewrite was coming along.

Ms Manor (moving to address the whole class.): Can I just interrupt for a second please? Shh, girls, listen. If you need to print now you’ve got these two periods before lunch where there’s not too many people in the library so you need to do it the next two periods if you need to print. (Tape labelled 19-10-01 Periods 3 & 4 – girls talking with Ms Manor about trial rewrite.)

For the majority of the students this time was relaxed and it was left largely up to the students themselves to organise what they did and when they did it. Many moved freely about the school printing and carrying out their survey. Bernstein would refer to this type of situation as being weakly classified and framed.

The scriptwriters’ time was more structured by the teacher although there were times, which were quite informal and took the form of open discussion. There were other times, however, where the teacher took control and either dictated or wrote parts of the script for the girls. This occurred more frequently as the deadline for the trial approached. The teacher, in these instances, acted more as a guide or facilitator than as a font of knowledge but her resolve to get the script workable could be seen to be her main motivation.

Ms Manor: OK, have you got right from the beginning where the judge comes in and everyone stands and they bow? ... So let’s start where the prosecution starts their first, you know where they get up and they make a speech to the jury. ... So what you

both do is to start the trial off (speaking to the Crown prosecutor and the Defence Attorney), after they've done all those other boring bits, you get up, first Anna and then Claire Beck and what you do is you say, "Ladies and gentlemen of the jury, I'm here today to prove that Henry Posley has used his influence over this woman, Mimi Rhinehart, to try to defraud her of her money. I will prove to you that he was working in cahoots with the blonde, Lisa Posley, and la di la di la and prove that he maliciously went out of his way to steel her money." That's what you say, Anna. (This was spoken quite rapidly and Anna had to work on recall rather than note taking.)

Claire Beck:       What can I say? Tonight I will be representing (interrupted by teacher who commences to painstakingly dictate to her what she will need to say, becoming irritated that she can not proceed at the pace she would like to). (Tape labelled 19-10-01 Periods 3 & 4 – girls talking with Ms Manor about trial rewrite.)

Claire Beck, the Defence Attorney, hung on every word of the teacher but the others were often observed treating her as an equal and giving their opinion of proceedings without hesitation. I noticed that Claire Beck's attempts to discuss her ideas with the teacher were often ignored whereas the other girls were treated differently. The teacher was used to multitasking and proceeding rapidly with her thoughts whereas Claire Beck appeared to need a slower and more methodical and individualised process.

The girls working on the script rewrite were initially expected to do the mapping and survey exercises in addition to the rewrite but at this stage they were given an exemption from all other aspects of the unit to enable them to concentrate on the script. The teacher was not afraid to modify the tasks as the unit proceeded and did not mind if students seemed to learn different things. She had not spent much thought on how to assess the unit and appeared amazed that girls were so competitive and dissatisfied if they appeared to be doing more work than another. Everything had to be fair for them in terms of the division of the work and how much each person did. There seemed to be a concern that if the division was not fair then the marks would not reflect this, even though, according to the teacher there had been no mention of marks. In the folder of the mapping exercise the teacher had written a section for

bonus marks but seemed unaware that this could indicate that she would be giving grades for the work. Listening to the scriptwriters it appeared that they were under the impression that there was some competition between the Defence Attorney and the Crown Prosecutor and who ultimately won the trial.

On one occasion, when everyone was working independently in the one room, the teacher mentioned quietly to me that she wanted to go around to the other classrooms and see what the girls were doing with the unit so she slipped out of the room quietly. Surprisingly the girls did not notice her absence until they needed to ask a question and most kept working independently.

By the end of the week she decided that she should go over the mapping exercise with the whole class to ensure they had all done it. In my field notes I wrote

Teacher arrives and calls girls into the centre of the room to discuss their map reading. The girls doing the trial re-write have not done the mapping exercise and continue with the re-write but need to talk and yet get told to be quiet (Ms Manor looks at them and mouths “shhh” at least twice). These girls cannot follow the mapping, as they haven’t done it. Claire Beck put her hand up and was told to put it down, which she did. Twenty minutes later the teacher asked her what it was she wanted and she replied, “Could we go outside?” The script re-writers then went out so that they could continue with their work. (Field Notes dated 19<sup>th</sup> October 2001, Periods 1, 2, 3, 4, & 5.)

After going through everything she wanted to say she stopped and allowed the girls to get on with the job of finishing everything off. She did not want to interrupt her train of thought to attend to questions from the girls that might not contribute to the mapping exercise at the start and so put Claire Beck off until she realised that she might have a valid question.

At the beginning of the second week the teacher was showing signs of anxiousness and was determined to make sure the girls would have everything completed on time. She was also aware that there would be some interruptions to the week and wanted to alert the girls to this so that they could plan for them. She commenced the first lesson of five lessons on the Monday reminding the girls of what needed to be done and setting deadlines.

Ms Manor: We have got to get everything basically done today. We've got one period tomorrow, Wednesday you've got excursions and things like that so, it means people will be disappearing in and out, also there's photographs. So we are planning to have the trial on Thursday because you've done such a good job at getting everything sorted, so Thursday is the day we are planning to have our trial. .... Also, today, if I haven't already got your "Finding Your Destiny" sheet, that needs to be finished and printed off. If you missed out on a few things because you weren't sure how to do it, now is a really good time to finish it off and make sure it is all great. If you have finished that and everything else what you are going to do next is you're going to go from the Effie Crump Theatre and work out your own instructions to get back using those maps.

You are also going to finish off your mapping and your survey. .... Evidence box, we are missing a few things. We still don't have a turban, we still don't have the note that was written in lemon juice and we haven't got the code cracked either yet. Crown Prosecutor and Defence Council, you need to check today that if there is anything you need, we have it. OK?

Let me look at my list- complete mapping, survey, evidence. Yeap. Once you've done all of that I'm going to get you to make a table in your laptops with all the evidence in the story and explain the importance of each of the pieces of evidence. (Transcribed from tape labelled 22-10-01 – Monday P2-6.)

At the end of the unit, when the girls performed the actual trial, the teacher was largely an observer until something went wrong. Then she stepped in to organise things. This was where Claire Beck was unprepared and the teacher had to quickly write out questions for her to ask during the trial, so a short recess had to be called. The trial resumed quite quickly and Claire did a good job of her questioning. At the end of the trial the jurors went outside to deliberate on the verdict. The teacher gave them a sheet of paper with a few questions to guide the discussion and instructed them that the decision was to be unanimous. The girls in the jury, eight girls in total,

went outside the classroom to come to a decision. Nowhere on the sheet that she gave them was it recorded that Henry Posley was being tried for fraud and that his guilt or innocence in relation to the fraud was the issue.

One girl refused to consider anything other than his innocence, which was recorded in my field notes.

That she didn't mind if they wanted to say he was guilty, it was all right, but she still thought he was innocent. ... The rest of the girls were becoming impatient and just wanted to give their verdict and be done with it. Some of them were worried that the verdict needed to be unanimous though and this caused the delay. One girl took control and decided that they would never change the girl's mind, it wasn't worth arguing about and that they had better say it was unanimous, even though it was not. What the teacher didn't know wouldn't hurt her." (Field Notes dated 26-10-01, Period 3 & 4, page 2.)

In the end the jury went back in and declared Henry Posley guilty of fraud, claiming that the decision was unanimous. The Judge was required to read the finding and remand the guilty party for later sentencing. When Henry Posley stood, the girl, who was acting the part and had been sitting quietly for the entire duration of the trial, stood in a comical fashion that made everyone laugh uncontrollably. This lasted for a minute while the judge finished the concluding remarks. At the second it was over the teacher applauded, said, "Well done" and then hastily called everyone together to think about things that they had learnt from this integrated unit.

Ms Manor: This integrated unit that we have just finished, I want you to have a think about what you have done over the last two weeks, have a thiiink, thiiiink rououound about what you have done, and I'm going to ask you to tell me something that you have learnt, something that you sort of knew before but now you know better or something that you discovered, or something that you would like to find out now that you have done it all or something that you liked or didn't like during the last two weeks. [She then repeated all of this and allowed fifteen seconds before calling for ideas.]

Jane: I learnt how to read maps better.

Ms Manor:           Excellent. Ms Barter was telling me you did a great job in the bus too aligning the maps and things.

Anna:                We learnt how to write a lot of questions.

Ms Manor:           That's right, you did an excellent job writing those questions too because there were heaps of them.

Casey:              I now know how hard it is for the jury to come to a decision.

Ms Manor:           That's right. I was on jury duty in the holidays before last and I thought it would be a piece of cake and it was so hard, so you guys did an excellent job on the jury, so well done. (Transcribed from the tape labelled Forensic Science Unit, Trial, 26-10-01, side A)

The teacher continued questioning girls in this way with lots of positive comments about the work interspersed with things that they had learned. This reflective, guided discussion went on for eight minutes. The girls felt that they had learnt many things, including; writing a script is really hard, how to set out a courtroom, how to ask questions, how to do mapping, how to do percentages, how to follow directions, how to lay out a survey, the dress code for court, how the court works, how to do different graphs, how to read maps, can't bring mobiles and recording devices into court, how to write a newspaper article, and you hold the Bible in the right hand. The questioning period ended and the girls were set to work answering a Self-Reflection sheet (see Appendices J and K).

The integrated unit ended at the end of this day when all four classes met in the Middle School Learning Centre to be awarded presentations for their efforts in the unit. Only four to six girls per class received an award. In Ms Manor's group Anna was given an award for her contribution towards writing the script as was Lara, Jane was given one for her problem solving skills and initiative, Katie was given one for writing her own section and Emelia Stammer was given one for her ability to take risks. This was the only form of assessment they were given for the entire unit. The teacher held back on giving the girls their assessment of the Forensic Science Unit, that they had completed the term earlier before commencing the integrated unit, until after the integrated unit was completed. She gave them the test that she modified to

include sections more relevant to the integrated unit and that would test their thinking more than recall of facts. She was pleased that they had learned a lot from the integrated unit as the science unit had been some time ago and she hadn't expected all of the girls to do so well.

### ***The Students***

In this section I will present a view of the unit from the perspective of some of the students. These perspectives are presented as a discussion of the progression of that particular student throughout the unit.

#### **Claire Beck**

Claire Beck started the unit in a surly mood. She had problems with her friendship groups and initially was unable to find anyone with whom to work. The teacher had to place her with another girl and I was surprised when she was voted to take on the role of Defence Attorney, as this role required a lot of cooperation with the others who were selected to write the script. The other girls chosen to write the script were: Lara the Judges Associate, Debbie Stone the Judge and Anna the Crown Prosecutor. From the outset it appeared that Claire was going to have difficulties completing her requirements and seemed reluctant to freely contribute anything to the work.

In my initial writings about the unit I started to write about Claire Beck and the apparent difficulties she was having. In a narrative I wrote about the trial (see Appendix S) I included the following statements about Claire and her apparent lack of either ability or resolve to contribute to the script writing.

102 The defence attorney did not end up writing her own script as she really was too confused about tying evidence in to the trial and had little idea of what she should say or do. The following conversation is indicative of the difficulty she was having:

Claire Beck:       What's another question I can do based on these people?

Lara:                I've got the names of the jury and they're bringing in stuff as well.

Claire Beck:        What does this mean that she was putting on makeup at the time?  
What the hell does that mean?

Anna: OK, where's this? Remember they were putting on makeup to make them look black; the Swami was black so he put black makeup on to make him look black.

Claire Beck: What can I do because I'm the rejecting person, so what can I do to put on that Henry was black?

Anna: So what do you mean? You're with Henry, so, "how can you prove this sponge was used to put on makeup? (Claire Beck wrote this down as though it were being dictated.) (Transcription from Second Lesson, 17-10-01, Period Four.)

When talking with her about the trial she appeared to follow what you were saying but did not appear confident to write anything for herself. I wrote in my field observation notes,

Claire Beck doesn't know where to begin in writing the questions for her defence. Where Anna has written pages worth of questions, Claire chooses to sit and stare, waiting for someone to start her off. She appears to understand what she has to do but lacks the initiative to do it independently. Ms Manor has had to spend time today explaining what type of questions she should use. Claire has written her questions today and Debbie Stone is going to take home everything and type it up into the script tonight, ready for tomorrow's run through. (From field-notes, Wednesday 24-10-01, Periods 5 & 6)

Throughout the entire two weeks Claire Beck showed that she had little confidence to go ahead and do anything on her own, she was constantly seeking approval that she was doing the right thing and seemed afraid to even attempt something in case it was wrong. During the third day of the integrated unit she asked the teacher about the type of questioning she should have as defence attorney, the teacher responded,

Casting doubt – eg the hairbrush. How do you know it belonged to Henry Posley? Your job is to cast doubt and also with Mimi. You could ask things like, "Did you willingly

sign the contract?” and “What was your relationship with Henry Posley?” Your job is to make it look as if she is acting like a jilted lover.” (From field-notes, October 18th 2001, 12:15 p.m.)

Towards the end of the day Claire Beck came back to the teacher with some questions written seeking approval. Ms Manor spoke to her and said,

How many fingerprints do you need to prove that these belong to Henry Posley? You can do this and then when they don't know or give a number bigger then they have you can tell the court that they can't prove anything. (From field-notes October 18th 2001, 2:32 p.m.)

After several times listening to the tapes, I began to realise that Claire Beck was really working hard but that she was not being listened to or encouraged. I used the following transcript to support my original ideas about Claire. This transcript can also help explain why Claire was treated as she was. The teachers and I appeared to have a preconceived notion that Claire could not do the work for herself and needed to be told what to do. Once clear about her role, we believed that she could actually convey a very convincing performance.

The following excerpt is taken from the transcription of the team meeting I attended shortly before the actual trial. It begins with the teachers discussing the distribution of awards for the integrated unit as they felt that this would be a good way to acknowledge students who had contributed well to the integrated unit. Claire Beck was not considered to be one of these people.

Ms Corr:           How do you give it to one of the lawyers without giving it to the other?

Ms Manor:         Well Claire Beck is the other one and she is not good at coming up against adversity and so crumpled into a heap.

Researcher:       That was before she blew up.

Ms Barter:         Laughing.

Ms Manor: She and Debbie Stone had a few words occasionally and there were a few tears, so I don't know that I will necessarily give it to Claire Beck but I will definitely give one to Lara.

Researcher: Has she [Claire Beck] actually written a closing argument?

Ms Manor: She's done the idea she just can't put it down on paper.

Researcher: Has she actually tried to put it down on paper? She wants you to dictate it to her.

Ms Corr: She can present it.

Ms Manor: She'll do a good job of that because that's where she likes it because I'm very dramatic and will say, "Ladies and gentlemen of the jury, my client has been tricked into this" and she goes, "Oh" and quickly writes it all down. So then when she comes up to it she will do a great job.

Ms Barter: Well they're relevant skills.

Ms Manor: I've written bits and pieces of the script for her and so she is going to do a good job.

Ms Barter: She has a very sonorous voice too so that will help her in the court scene. (Team Meeting, 26-10-01.)

Ms Manor was aware that she had dictated to Claire Beck what she was to say and was therefore confident that she would do a good job. Little effort was put into helping Claire write her own questions and she was not acknowledged for intelligent comments. By contrast, Anna was always acknowledged. The teacher's primary objective appeared to be the smooth flowing of the trial rather than how the girls arrived at this end point. The teacher spent a lot of time reminding girls what needed to be done and going over various activities with the whole class to make sure that everyone had progressed to a certain point. However, there were few one-to-one interactions with girls such as Claire Beck who appeared to need greater guidance. Perhaps it was seen as being easier to dictate what she needed to say rather than work

through it with her. More likely, there just wasn't time for this type of specialist attention.

Shortly after choosing roles the scriptwriters were singled out for special attention by the teacher and taken aside to work on the script. At the commencement of the process the teacher spoke predominantly to Anna as she began telling the four girls what needed to be done. She spoke about Anna's opening remarks and at this stage Claire Beck interrupted wanting to know what she should say. The teacher then commenced to tell Claire what to say and Claire wanted to write it all down word for word. Anna had not written hers down word for word but relied on her ability to understand the gist of what the teacher said and come up with her own wording. It was clear that this was how the teacher would prefer to work but she still dictated Claire's speech. After Claire got her opening remarks copied down, the teacher proceeded with the next section of the script, which happened to be Anna's. Claire sat and listened sometimes but was obviously becoming anxious that she would never get her turn. At one stage, when Anna asked if she could re-examine a witness, Claire interrupted saying that it would take too long. The teacher told Anna that they would not re-examine but did not say why and did not acknowledge Claire's comments. Claire then became quiet for a long time. The teacher continued working through the script, which was all to do with Anna's questioning time. Lara and Anna did most of the talking with the teacher. Eventually Claire interrupted with,

Claire Beck:        They're all the Crown Counsellor.

Ms Manor:         Yeah, that's right. (The teacher continued with what she had been saying to Anna.) (Transcribed from tape labelled 19-10-01 – Four scriptwriters with teacher.)

After about an hour of talking had gone by and the teacher soon needed to leave for a meeting. Claire interrupted once again,

Claire Beck:        I've got all my questions in here.

Anna:                Do we do all my questions and then hers or do we take it in turn?

Claire Beck:        I've got all these questions here.

Ms Manor:         Yeah, what's wrong with that?

Claire Beck: Are they going to get used?

Ms Manor: Yeah, what you do is this. (Looking at Anna), you ask the questions of the fingerprint person, (looking at Claire Beck) then you ask the questions of the fingerprint person and then they say, “see ya”. And you (looking at Anna) bring up who’s next. And then you (looking at Claire Beck) talk to the next person. OK?

Claire Beck: Yeah. Ms Manor, what DNA question can I ask Annie Rush? I’ve been sitting around for ages.

Ms Manor: Is it possible that these hairs could have been placed there by someone else? (The teacher said this out loud as she typed it into the script for the girls but Claire Beck proceeded to write it down on her paper and insisted on having it slowly dictated to her.)

Debbie Stone: It’s three minutes to twelve. (The teacher needed to go to a meeting at twelve.)

Anna: Do you want to go now? You can if you like.

Ms Manor: I’ll go in a minute (responding to Anna’s question.). (The teacher stayed for a few more minutes and dictated the rest of Claire Beck’s opening speech to her before leaving for the meeting.) (Transcribed from tape labelled 19-10-01 – Four scriptwriters with teacher.)

After the teacher left for her meeting Claire continued working, appearing anxious to get her part organised. She called in another girl who was to act as a witness and started questioning her to try to work out the script. Claire appeared to be unaware of the significance of the questions in proving her case and became angry because this girl wanted to do a lot of speaking and was not being very cooperative. She tended to accept what the girl wanted to reply rather than manipulating it to work to her advantage in the case and blamed any inconsistencies on the girl; almost as if she had no control over what the expert witness was going to answer. After she left, Claire began dictating the questions to Lara who added them to the script.

Lara:                   What's that mean?

Claire Beck:         I don't know, she's written what she's written.

Lara:                   OK, fine.

Claire Beck:         On Henry Posley's brush.

Lara:                   It's not; it's the Swami's. .... It was Henry Posley's hair.

Claire Beck:         She is not with it today, totally not with it. .... No, I don't want that, I don't want them to know that it was Henry Posley; I want to say it wasn't.

Lara:                   I know but she can write what she wants to write.

Claire Beck:         It's stupid the way she did all that. ... She doesn't need all those questions. Nobody's got that much questions. (Transcribed from tape labelled 19-10-01).

After some time trying to write questions for different witnesses and getting Anna to dictate several more questions to her because she couldn't think of her own or was afraid to try to think of her own, Claire gave up.

Claire Beck:         OK, that's done. I've finished. I'm not doing any more questions. I can't be stuffed. I've been writing questions for the last two hours and I'm very tired. I've got to go to sleep. I'm not going to do anymore work.

(Girls muck around and let off steam for five minutes.)

Anna:                 Have you figured out what that note said? (Referring to the coded message).

Claire Beck:         What note? (Transcribed from tape labelled 19-10-01).

Claire was easy to anger and often became frustrated, which stopped her working to her potential. She found it difficult to be patient and methodical.

The teacher had helped her write her script. She was supposed to do her own summation but she did not get done and the teacher wrote it out for her just before

the trial. I wrote in my field observations of the run through of the trial the day before they were to do the real thing.

Claire Beck had put her questions on a disk yesterday and given them to Debbie Stone to add to the script last night. Debbie says she put everything that was on the disk into the script, but the questions are not there! Claire gets very upset. This is where Ms Manor tells her not to “drop her bottom lip”...Claire sits with her head on the desk moping, as she feels angry and defensive.... Claire and Debbie can't find the questions on the disk and Debbie has to try to help Claire write the questions again. Claire's behaviour indicates that she feels as if others will think that she has done nothing.

(Field Notes dated 25-10-01, Period 3 & 4).

Claire did a convincing job in the dramatic presentation of her case and in this sense was better than the crown prosecutor who read her script loudly and competently but without any real conviction. Claire's quick read through of her summation was enough for her to portray the character extremely well and therefore led me to believe that she appeared to understand the reasoning behind what the teacher wrote. Why she had difficulty could be for any one of a number of reasons. Claire seemed to lack conviction in her ability to write the correct thing and had a fear of being wrong. She had a lot of conviction in herself as being good at English and drama and I would have expected her to at least feel that she was competent to write her questioning. Her rendition of her part in the trial indicated that she understood what was going on.

Defence attorney: “Some room for doubt? Mmm, no further questions your Honour.”

(Said with total conviction and understanding of the implications of the question.)

(Transcribed from tape labelled Forensic Science Unit, Trial, 26-10-01, Side A).

The inflections in her voice all indicated that she was aware of what she was saying and the part it played in the unfolding of the script and the decision made by the jury. It may be that this wasn't the case and that her flair for the dramatic allowed her to appear knowledgeable about what she was saying without really understanding it.

## **Annie Rush and Jane**

Annie Rush appeared to be a very well focused student who always wanted to do her best. She was friendly and enjoyed having fun but tended to work with the girls who were more serious about completing all of the work. I later discovered that she had been diagnosed as dyslexic and had great difficulty in writing down what she wanted to say. Her mother revealed to me that her teachers were surprised to learn this but had felt that something was not right as she contributed well in class and her verbal discussions were extremely good. However, she had difficulty writing anything down that showed any great depth of thought. Her mother influenced her by encouraging her to write short and simple sentences because she discovered if she tried to write anything that was more complicated she would get confused. Her mother said of her

26: Annie Rush: ... She can't be tired; it gets worse when she is tired or stressed. ... She is a perfectionist, so if it doesn't turn out exactly as she wants she loses the plot over it. She knows what she is talking about, she is a bright kid, it's just getting it down on paper. She's always going to have a problem, it won't be fixed; computers go a long way to fixing it. (Parent Interview with Mrs Rush, 13-12-01).

Annie Rush often worked with Jane and was usually found sitting close to her and discussing the unit although she would also work independently at times. Jane was quieter by nature, not one to draw attention to herself but confident and very capable. She participated in a lot of co-curricular activities and mixed well with all the girls but preferred to concentrate on her schoolwork rather than fool around with the less serious students. Neither girl appeared to have any close friends in the class. Both girls knew that their parents were supportive of them and not unrealistic with their expectations.

62: Researcher: So they [your parents] want you to be an "A" grade student?

63: Annie Rush: Well not really, they know that some places I'm not as good as other things. So if I'm, 'cause I'm not that good at English, they like really support my other classes. (Student Interview with Annie Rush, 19-11-01).

Annie Rush and Jane first came to my attention in the lesson towards the beginning of the unit when the class was voting for students to fill the various roles. They wanted to be involved in the trial and appeared to have no reservations about acting in front of their peers. They tried for several key roles but were unsuccessful each time, usually just missing out on the role to a more popular student. Annie Rush actually missed out on the role of Defence Attorney to Claire Beck, probably because it was well known that Claire Beck had a very good sense of the dramatic and Annie Rush was not so good at English. Jane tried for several roles, the last one being for the role of the lawyer who drew up a contract and would be called as a witness. The teacher used her power in the classroom to make the decision here instead of the class voting and when Jane was told of this she was quite upset but said nothing. I only discovered in my interview with Jane that she felt that the teacher had unfairly treated her.

12: Jane:               Someone had told me that I'd gotten it, Carrie, Melanie, except that one girl put two hands up for the other girl and Ms Manor counted it as two. (Student Interview with Jane, 20-11-01).

Ultimately the teacher gave both of them roles as expert witnesses because she particularly wanted them to be involved, believing that they would contribute well to the writing of the script.

77: Teacher:           ... Do you want to be one of my experts? (Looking directly at Annie Rush).

78: Annie Rush:       Yes.

79: Teacher:           Which one do you want to be?

80: Annie Rush:       Hair person.

81: Teacher:           Right, Annie Rush is the hair expert. What about fingerprints?

82: A Student:         Jane?

83: Teacher: (Looking at Jane) Jane? OK. So they're our roles. Now the people who are left over, stick your hand up. You guys are my jury. (Second Lesson, Forensics 17-10-01).

Jane was particularly hurt by the voting procedures and said of the teacher's decision to make her a forensic witness.

10: Jane: I didn't really like being a forensic person so I tried to do so many other things and she [the teacher] said that, "I want you because you're such a good student that no way I'd let you ever do the others."

11: Researcher: Oh, so did you feel a bit, sort of a little bit upset? (Jane nods her head in the affirmative). (Student Interview with Jane, 20-11-01).

The teacher was never really aware of Jane's true feelings in this regard as she did not appear to be upset at all. Both of these girls accepted their roles and commenced work, appearing to be enthusiastic about what they were to do. They began with their character profiles. Jane was trying to develop her character along the lines of the stereotype, as was suggested by the teacher, but Annie Rush preferred to have fun with her character but was still concerned to keep her character believable. The following transcriptions help to display the different attitudes of the two girls.

108: Annie Rush: What's my approximate age if I'm the hair and DNA expert?

109: Jane: The mad scientist's age.

110: Researcher: (Speaking to Annie Rush.) I'd put you in your thirties.

111: Jane: I've got seventy.

112: Researcher: (Speaking to Jane.) That would be retired, unless you wanted to keep working.

113: Annie Rush: Thirty to forty? No that's too... I'll just put thirty-five to forty.

114: Researcher: (Speaking to Annie Rush.) Well you would need to be in your thirties at least to be considered an expert.

115: Annie Rush: Thirty-five to forty.

116: Jane: Can I put seventy?

117: Researcher: (Speaking to Jane.) I'd say sixty, sixty-five, close to retiring.

118: Annie Rush: Should I be young or old? Can I be a young expert? (Second Lesson, Forensics, 17-10-01).

It can be seen that both girls were having a separate conversation with the researcher at the same time, a skill that their teacher also possessed and utilised but was not available to all of the students. The rest of this conversation, recorded later in the second lesson shows the different approaches by the two girls and the commitment to follow everything the teacher asked for by Jane.

Researcher: The question is, "Are you going to make it realistic or fun?"

Annie Rush: Fun.

Jane: I wonder what my least favourite thing in the world should be.

Annie Rush: Knowing that you are wrong. ... Adjectives are doing words?

Jane: Describing words.

(Annie Rush starts writing some adjectives down to describe her character's personality.)

Annie Rush: (After thirty seconds.) My adjectives to describe my personality are happy, energetic, fun, loving ...

Jane: You're not really a stereotype are you?

Annie Rush: No.

Jane: You're supposed to be.

Annie Rush: No. You're the stereotype; I don't need to be a stereotype.

Jane:                   What if I don't want to be the stereotype?

Annie Rush:         Well you're stuck with it now.

Jane:                   I still don't know what the thing I hate worst would be? (Second Lesson, Forensics, 17-10-01).

Later in the week, when the girls were working on the unit, I recorded a conversation with Jane about the mapping exercise. She had almost finished the exercise and found it quite difficult. We went over the final clues together and she found the answers, orientating herself very quickly on the map. In order to find some of the answers she was required to use her initiative, which she did very aptly, ringing Transperth for details of ferries and buses and His Majesty's Theatre for details of the ballet performance. She also approached me for a copy of the street directory so that she could find a scale that was not given on the maps, so that she could work out a distance. Not many students contacted Transperth and no-one else asked for a scale in order to calculate the distance but many students copied Jane's answers, which they acknowledged in the public forum of the classroom. Jane allowed girls to copy her answer even though in the interview she expressed the concern that the teacher sometimes did not know what the true ability of a student was because some students received help from other students. This happened to Jane more than once. At one time, in relationship to the mapping exercises she asked me if it mattered that the teacher gave an explanation to a student sitting nearby that contradicted an earlier explanation that the teacher gave to Jane about the same thing. She was concerned to know which explanation was correct, as she had been listening intently to both explanations.

All students found the mapping exercises to be quite difficult and as I helped some through it I realised that there were some errors and omissions on the map that were important, such as one-way arrows and two streets of the same name.

I had not involved myself with Annie Rush and the map reading exercise but recorded a conversation Annie had with Claire Beck about her evidence that she would be giving in the trial. This conversation occurred about half way through the unit and indicates that Annie was at least trying to tie the evidence together for the case even though she was frustrating Claire.

Annie Rush: Have you asked me before this if I think that Henry Posley and the Swami are different people?

Claire Beck: No.

Annie Rush: You have to ask me that otherwise this doesn't make sense.

(Transcribed from the tape labelled, 19-10-01- Four scriptwriters.)

During the trial the questioning came together quite well and Claire was able to interrupt the Crown Prosecutor's questioning of Annie Rush, objecting that it had not been proven that the Swami and Henry Posley were the same person.

Crown Prosecutor: Swami Morishu had black curly hair but he had red fibres on his hairbrush. The doorman will confirm that only three people visited and they had blonde, grey and brown hair. The red hair fibres found on the hairbrush belonging to Henry Posley, who had not been seen visiting the Swami, so Swami Morishu must have been wearing a wig as a disguise hiding the fact that he was Henry Posley. [This was said very well and the inflections in the voice indicated full comprehension of the manipulation of the facts.]

Defence attorney: Objection your Honour. The Crown has not proved that Henry is the Swami, so it is not a fact. [This was said with great conviction and had been said in interruption to the last few words of the Crown Prosecutor. The timing of the interjection indicated that she had been following the reasoning and was aware of the implications being forwarded and her own role in the scene.]

Judge: Sustained. If you have no further questions Ms Taylor the defence can cross-examine.

Crown Prosecutor: No further questions your Honour.

Defence attorney: Doctor Tayler, who found the hairbrush?

Witness: I believe it was Mrs Rhinehart's niece and her friend.

Defence attorney: Is it possible that they could have planted Henry Posley's hairs on the brush?

Witness: I guess it's possible but it's not very likely.

Defence attorney: But it is possible. No further questions your Honour. [This was interjected in to the last few words uttered by the witness and the witness was not permitted to continue speaking. It was a very convincing rendition of many a court room scene seen on television.] (Transcribed from the tape labelled, Forensic Science Unit, Trial, 26-10-01, side A.)

Anna, the Prosecutor and Annie Rush, the expert, wrote the questions, for use in the trial when the hair expert was to be examined by the Crown Prosecutor. These questions showed that they understood the intent of the evidence. The questioning of the Defence Attorney, Claire Beck, was convincingly rendered but was written by the teacher. Annie Rush, in her earlier conversations with Claire Beck had shown that she understood how the evidence should work but Claire was not really sure.

Jane also understood how her evidence tied into the trial and wrote her own answers, whereas the teacher wrote the responses for Claire. Jane had no problems, nor did Annie Rush, who in spite of being dyslexic was able to put her words together well when they were rendered as part of a dramatic presentation. Neither Jane nor Annie Rush gave as convincing a portrayal of their character as Claire Beck did even though they appeared to understand the evidence and the implications much better than Claire.

## **Conclusion**

In this chapter I have attempted to describe my impressions of the Integrated Forensic Science Unit. The chapter is divided into two main sections, Background and The Unit in Depth.

In the first section I provided the background of the school. This included data from interviews with the teacher about her expectations of the unit. An overview of the unit was provided as well as a chronology of the unit.

The final section is entitled *The Unit in Depth* and covers the unit from the first organisational lessons, to some section in the middle where the routine changed and finishing up with sections of the trial or latter lessons. These writings explore the teacher's presentation of the unit and the way three girls, in particular, dealt with the unit. I tried to understand the students' learning experiences and to glean ways in which this might differ from the teacher's expectations of the unit.

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## Chapter Seven: A Science-Based Unit

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### Introduction

This chapter is divided into two main sections. In the first section, entitled Background, I provide an explanation of the booklet that was used by the teacher as the main resource for this unit. Following this is an overview of the unit explaining briefly the chronology of the lessons and the main concepts and ideas addressed in each of these lessons. In the second section, entitled The Unit in Depth, I give a description of the unit and my impressions of how several students experienced the unit.

### Background

This chapter deals with the science-based unit called, Above Our Heads. The unit continued on from the end of the integrated unit to the end of term and consisted of 22 periods of 50 minutes duration each, commencing 30 October 2001 and finishing on 30 November 2001. Some lessons consisted of double periods and so the teacher actually met with the students over 12 lessons. The same teacher and students were involved in both units of work observed.

The final stage of the integrated unit was held on a Friday and involved role-playing in the form of a trial. The students had the weekend to study their forensic science work before attempting the science test for this unit the following Monday. The test was held in their usual room for science, a laboratory that they had not been in for the previous two weeks. Most girls did very well in the test and the teacher commented that she was surprised because the science unit had been in the previous

term. She believed that the integrated unit must have been responsible for the better than expected results as it was the only form of revision that they had. After completing the test the girls went on with downloading the files needed for the science-based unit, *Above Our Heads*, and completing their portfolios for part of their assessment. Lessons for the science-based unit did not commence until the next day, in the laboratory, the lesson before recess time.

The third week of fourth term, when the science-based unit *Above Our Heads* commenced, was disrupted by the Year 12s letting off steam on the final few days of their school life. The Year 7s were unsettled by this extra distraction and took a while to get into their work. In addition the athletics carnival cut into the available time and took two lessons from the unit, which had to be completed prior to the final week of the school year. Although the unit took four weeks it really only amounted to 19 lessons, which was less time than that devoted to the integrated unit. There was no final test although the students' booklets were collected and marked. It turned out that the teacher did not manage to collect every girl's booklet and so some were not given any form of feedback on their progress throughout the unit.

### ***The Student Guide to Above Our Heads***

The students were given a guide or booklet to the unit *Above Our Heads* (see Appendix O). The guide contained many questions and fill-in-the-gap sections that could be answered by accessing the background reading that had been placed in a file on the school intranet. This file was used in place of textbooks. The booklet also provided space for the students to jot down results of experiments so that they could leave their laptops at a safe distance from these experiments.

The teacher did not like the students taking these booklets home and experience told her that they were better kept at school. On the front inside cover of the booklet was the overarching statement (No. 5) "Students describe and reason about patterns, structures and relationships in order to understand, interpret, justify and make predictions." (From page 1 of the student booklet "*Above Our Heads*") Underneath this were the outcomes to be assessed in this unit (see Appendix O). No mention of these outcomes was made by the teacher in the classroom but they were printed on the inside cover of every booklet. On the second page was an introduction to the unit.

The booklet included thirteen activities. The activities varied from questions with spaces for answers about a reading that was in a file on the girls' laptops to partial experimental designs that needed to be thought through and completed. The girls were encouraged to take responsibility for recording their method and results and a conclusion, something the teacher had been working on all year to develop. The following activities were included in the booklet:

- Introduction (Notes about variables, data collection, trials, averages, summarising and improving investigations.)
- Jumping Up and Down! (An experiment that the girls needed to design and write up.)
- Gravity Sucks! (Fill in the gaps about gravity, Newton, Copernicus, galaxies and a reflection about gravity and its uses.)
- Is Air A Real Substance? (Fill in the gap section about the phases of matter.)
- Air takes Up Space (Space for a drawing of three experiments to show that air takes up space. No room for a proper write up.)
- Air Exerts Pressure (Space to draw two experiments showing that air exerts pressure. No space for a write up.)
- Parachute Problems (A fill in the gap section about parachutes with space for a drawing about how a parachute works.)
- How can you change a parachute to make it fall slower or faster? (An investigation about parachutes that was to be designed in full and recorded in a file on the girls' laptops.)
- How does air behave when it is heated? (Skipped due to lack of time.)
- Balloons – Just A Load Of Hot Air? (Skipped due to lack of time.)
- Air Streams and Mr Bernoulli (Skipped due to lack of time.)
- Aerodynamics (A fill in the gap section about aviation, forces of aerodynamics, gravity, thrust, drag, lift and air pressure.)
- The Great Dart Championship (An experiment to be designed with spaces for Aim, Equipment/Apparatus, Method, Results, Conclusion and Reflection.)

The activities were completed in order except for the topics, “How does air behave when it is heated?” “Balloons” and “Air Streams and Mr Bernoulli”, which were skipped all together due to lack of time. The final activity, “The Great Dart Championship”, was done in conjunction with a file concerned with paper folding

that was to be found on the school intranet. In that file were step-by-step instructions for folding five different paper aeroplanes that the girls needed to make up to perform the experiment. The folding of the paper planes proved problematic for most girls and one girl was observed running from desk to desk, folding planes or helping out all the other girls.

### ***Overview and Chronology***

The science-based unit, *Above Our Heads*, commenced on Tuesday 30 October 2001. The girls had downloaded the relevant files onto their laptops the previous day, which had been a day of testing and completing work needed for their portfolios, to be taken home and read in conjunction with their report. Apart from a test of the forensic science work, the rest of the time was very unstructured and devoted to completing work and getting up to date before commencing the new unit. The girls needed to download a file on the school intranet to be used in place of a textbook for this unit and to complete their portfolios of work samples.

During the first lesson of this new unit the teacher handed out the student booklets or guides. All girls had on their laptops a copy of their work and a file for reading and answering questions in their booklet. This had been downloaded from the school intranet and could be taken home if needed.

After the unsettledness of the first two lessons because of outside distractions the unit soon built up a rhythm of its own, quite different from that of the integrated unit. The teacher spent all of her time pacing students and getting them to work as one, filling in gaps in their booklets and completing experiments. There was very little time when the teacher left the students to their own devices and she was constantly drawing the class together to ensure that they were all up to the same place in their booklet. The students were given the second part of their booklet during their second lesson and were told that they would, from now on, need to continue from where they left off the previous lesson. The girls had been used to being responsible for organising the progress of their work during the first two weeks of this term and now found that they were receiving constant direction from the teacher who insisted, "If we can all do this at the same time it will save a lot of time." (Field Notes dated Thursday 1-11-01 Period 5 & 6)

The lesson proceeded with the class reading from their file, all together, and then discussing and writing up the method and results table of the experiment, “Jumping Up and Down”. The purpose of this experiment was to enable the teacher to lead a discussion about experimental design and the writing up of the method.

In the third lesson the experiment continued and a discussion about the use of Excel for averaging and plotting scattergrams took place. This experiment about jumping led into a discussion about gravity, drawing in the concepts of mass, distance and the effect on tides.

The fourth lesson, five days later, included a summary of gravity and the introduction of the concept that air takes up space. This led into three experiments intended to make this proposition clear to the students and all three experiments had to be written up before the students could leave.

The following day the teacher explained forces and gravity and drew a diagram of an atom on the white board. There was also a more detailed discussion about the states of matter linking the experiments, done in the previous lesson, and the fact that air takes up space.

Two days later the spelling tests had been scheduled but this was postponed due to the unexpected movement of the athletics carnival. The spelling tests were then used to commence the lesson a week later. These tests were collected and the lesson progressed to a discussion about parachutes and air resistance, and an experiment where the girls made replica parachutes and timed the rate of descent. There was a discussion about the variables that might affect this rate of descent and the girls had to design an experiment to test one of these variables. The next day they had the opportunity to continue the experiment and write it up.

Four days later the students completed the experiment and printed out a copy of the write up to be put on the notice board at the back of the laboratory. Three days later all girls were expected to have their experiment finished and had moved on to working through an interactive file about flight. The next day they completed this section on their laptops, left out a section about the behaviour of air when it is heated due to lack of time and continued with the section about aerodynamics. They were also given a school Attitude to Science Survey to complete.

Four days later they had their second last lesson for the unit where they commenced a section that required them to fold paper aeroplanes. They had five different aeroplanes to fold and then an experiment comparing the flight of these planes. The method was to be shown to the teacher before they could go on with the experiment. The teacher sat at the front of the room working on class lists for the next year while the girls organised themselves.

The final lesson for the unit was conducted three days later. The students completed their booklets before making a PowerPoint presentation about the Solar System. The teacher continued making up the next year's class lists and many girls went on to the PowerPoint presentation without completing their booklets. This presentation was intended to fill in time for the faster students.

The lessons were similar in many ways. The teacher would coordinate the work from the files or booklet and briefly discuss the work, which gave the girls the opportunity to make sure they had the correct answers. She would then move on to the activity, insisting that girls show her their method in writing out before continuing with the experiment. Some girls still managed to do the experiments without writing out the method in full. There were usually three lessons per week, two of which were a double lesson. Because of the cyclical timetable one week had five lessons and another four lessons. However, there was never the degree of intensity that had pervaded the integrated unit and due to interruptions some of the work became quite disjointed because of the length of time elapsing before getting back into the work. The teacher often called out, "Everyone stop for a minute and I will tell you what to do next." (Field Notes dated 1-11-01 Period 5 & 6)

## **The Unit in Depth**

In this section I provide my observations of the teacher and the students to show how the unit progressed. I provide examples from lessons early in the unit, towards the middle of the unit and at the end of the unit.

### ***The Teacher***

On the Tuesday, which was the first lesson devoted to the new unit, the girls were seated very uniformly around the laboratory and the teacher began the lesson by telling them that they were going to design an experiment to find out how high the

girls in the class could jump. The purpose of this experiment was to go over experimental design and to introduce the concept of gravity.

The teacher handed out the booklets from a cane basket that she carried with her. The booklets were fill-in the gap type booklets outlining the scope of the lessons. The teacher commenced talking about the third page in the booklet, which involved the girls designing the experiment to find out how high they could jump. After about five minutes of organisation the teacher directed the girls to read, as a class, from the file they had downloaded the previous day, starting on page three about high jumping. She then moved directly to talking about the design for the experiment and writing the aim and equipment list on the board for the girls to copy down into a file on their laptops. She asked the girls to write down a method for measuring the height jumped and talked about what would be needed in the table to record the results. This table, designed with the girls' input was copied directly onto the board. The write-up of the experiment was to be completed in a file on their laptops. I spoke with two girls as they went outside to do the experiment. When I asked them how they were going to actually measure how high they jumped, none of them could answer me.

The lesson had been quite noisy and disrupted and finished hurriedly with the girls being asked to return their booklets to the alphabetical pigeonholes at the back of the classroom.

When the students came into the laboratory the next day the teacher had reorganised the room. As the Year 12s were no longer using it, she was free to organise the space as she chose. The tables were arranged in groups of four in an informal way around the room.

As none of the girls had completed the experiment in the first lesson the teacher commenced by saying:

Ms Manor: If we can all do this at the same time it will save a lot of time. You will go outside and each of you will jump three times and measure the distance you jump from the ground to the bottom of your feet. You will need to show me your method before you go and do it. (She then wrote on the whiteboard, "Your method: Telling me and anyone who wants to repeat your experiment how you did it.") Does everyone

understand? (Met with blank stares and no response.) Some response would be good.

(A few girls replied half-heartedly.) (Field Notes dated Thursday 1-11-01 Period 5 & 6)

The girls hurriedly got to work and wrote up a method so that they could go on with the experiment. As this was a double period of 100 minutes duration there was sufficient time for the experiment to be done and for the teacher to direct some reflective discussion of the results. When most girls had performed the experiment and worked out their average results the teacher called for quiet and preceded to explain what to do next.

Ms Manor: Everyone stop for a minute and I will tell you what to do next. Remember how we wanted to get all the results? We need an Excel document and we are going to do a scattergram. I haven't done this before. You're going to be my guinea pigs. As we go around calling out results, I want you to write the numbers, no names, into your table. (Field Notes dated Thursday 1-11-01 Period 5 & 6)

It was obvious to me that the teacher was becoming agitated, I assumed due to the general lack of speed with which an instruction was followed and the apparent lack of cooperation amongst the students. This may have been heightened because of the proximity of the end of the year. I also assumed that the teacher had spoken to the girls clearly about what she expected from the class and had carefully explained how to write up reports etc earlier in the year. Certainly, in conversations with the teacher she indicated that this was the case but I had not observed these earlier lessons. At this point in time I could only observe what I interpreted as frustration on the teacher's part about the general lack of concern to adhere to these social rules. The teacher continued with yet more instruction in an effort to get all girls up to the same point.

Ms Manor: Has everyone got an Excel document? Is everyone ready? I'm going to call out your name and you will tell me what your average is. Is everyone ready? I like the way you guys don't respond. I might as well be talking to a fish in a bowl.

After going three quarters of the way around the class, Claire Beck responds:

Are we meant to be writing these down, because I haven't?

Ms Manor: That's why you should have told me you weren't ready. (The teacher continues to explain how to do the scattergram while several girls realise they should have copied down the averages and try to get the figures while the teacher is explaining, hence missing out on the explanations given.) (Field Notes dated Thursday 1-11-01 Period 5 & 6)

I noted that the girls appeared busy but were engaging in a lot of social chatter. Although the teacher often called out, "Shhhh", the girls did not seem to respond. I was surprised at how much of the work they managed to get completed despite their inattention. I was also surprised at the degree of inattentiveness given that the teacher was constantly calling them together and structuring the progress of the work as well as walking around the classroom and interacting with individual girls. This social chatter almost appeared necessary if they were to complete their work. At the end of the lesson the teacher asked them to take out their diaries and write down some homework, which she proceeded to write on the whiteboard. Once the girls had left the room I spoke with her and she commented that she had been trying to teach them how to write up an experiment all year. She wanted them to write more of the experiment for themselves but they didn't appear to understand what they were to do.

The third lesson, which was another double period and conducted five days later, was a little different because the teacher arrived dressed for the Melbourne Cup and also had an extremely hoarse voice. This time I noted with interest that her attempts to quieten the class worked with far less effort than in the previous lesson and there was a much greater degree of cooperation. The teacher hooked her laptop up to the TV screen and was able to show the girls what to do rather than having to issue verbal instructions and this worked very well. Some girls were having problems locating their booklets as another class had used them in the interim period and had not returned them. This had been occurring all year and only served to frustrate the girls and make them reluctant to cooperate. It was something that I had not observed the teacher adequately addressing. In fact, I did observe her lending booklets from another classes' pigeonholes to a couple of girls and noted in my field notes that the teacher did not request the girls to replace the booklets in their correct location. A quick look around the classroom revealed the fact that there were a lot of pieces of paper lying around the classroom which looked as if it was work that the girls were

expected to submit. These papers belonged to girls from all four, Year 7 science classes and gave the impression of a general lack of good housekeeping.

In this Melbourne Cup lesson the teacher mentioned the states of matter and remarked that there were in fact four states of matter even though only three were mentioned in their booklets. The lessons jumped from work about gravity to the states of matter with no obvious tie in, although I found myself following the lesson. She told the class that the fourth state was called plasma but that they wouldn't need to know about it yet. Out of interest I went around the class asking girls about how many states of matter there were and only one girl out of the whole class could say that there were four. Everyone else had either not heard or had forgotten what the teacher had said only minutes earlier. Some girls were busy finishing off the questions about gravity, some were writing up the two new experiments on the states of matter. Only a handful had actually commenced the experiments. The teacher would often introduce extra pieces of information. The girls chose selectively whether to listen or disengage. I was a little concerned that this may cause some confusion amongst the students as to what was relevant and what was added in for interest and wondered whether this issue was responsible for some of the social character of the class. I wrote in my Field Notes:

Are they (the students) eliminating extraneous information because they don't have to worry about this yet and therefore end up with a much narrower concept of science (than the teacher would anticipate)? The teacher is aware that she has told them but the girls have not taken it in and in this way there is a mismatch between the language of the teacher and the recognition of that language by the girls. (Field Notes dated Tuesday 6-11-01 Period 3 & 4)

Towards the end of the Melbourne Cup lesson the teacher wrote a third experiment on the board she did not draw attention to this although she had told the class that they would be doing three experiments when she started the lesson. Many girls watched her to see what she was doing and then knew that there was a third experiment to do. Others, however, did not notice what she was doing, as they were too busy with their own work and were not aware that there was more work to be

done. Some girls realised in time to get it completed before the end of the lesson but two girls did not and had to stay back an extra 15 minutes.

The teacher commenced her next lesson with an air of frustration and an attempt to get the girls into a regular pattern when they entered the classroom. She wanted them to take responsibility for themselves and start working whether she was there or not. She instructed them to start up their laptops and get their booklets out and commence working. I often witnessed her commencing lessons in this way. She also gave a reminder about how they were to behave when they had a relief teacher. There had been a number of unfavourable comments by senior teachers filling in as relief teachers, in middle school, about the middle school students' lack of social skills.

There was no lesson with the girls for a week due to the athletics carnival and when the teacher did finally meet up with them for a lesson she greeted them with the words.

Ms Manor: Get ready for your spelling test. When you come into my classroom what I would like is for you to sit quietly and perhaps study your spelling words. (Field Notes dated Wednesday 14<sup>th</sup> 2001 Periods 3 & 4)

She gave them the spelling test, consisting of 20 scientific terms that they had encountered in this particular unit. These words had been set as homework in the first lesson of this unit and had not been mentioned again. The tests were swapped with a partner, marked and then handed in for the teacher to record in her marks book. This was followed by yet another reminder that they should have booted up their laptops and been ready to continue with their work. In her frustration with their apparent lack of cooperation she said to them.

Ms Manor: Pay particular attention to me because I am the font of all knowledge. (Field Notes dated Wednesday 14<sup>th</sup> 2001, Periods 3 & 4)

At this midway point in the unit the teacher instructed the students to leave out the sections on balloons and hot air. She then discussed the use of parachutes, as this was an experiment that she wanted to have enough time to cover carefully. She continued with a lot of explanations and guided discussions, asking for the students' input, as was typical of her strategies for this unit. She seemed to place great emphasis on trying to keep the girls together in the work they were doing. The lessons proceeded

with this close supervision of the students' progress throughout and the experiment involving parachutes was completed, printed out and given to the teacher who put it up on the notice board at the back of the room.

The last two lessons for the unit were double periods and so the students had four lessons to complete the final experiment in their booklet. This experiment required them to fold paper aeroplanes and to record how far each different plane flew. The teacher sat at the front of the room preparing class lists for the next year group while the girls got on with folding their aeroplanes. This proved very difficult for most as the instructions were step-by-step on their laptops in animated form and I noted that the girls helped each other instead of asking for help from the teacher. The teacher required the students to write up their method accurately and to show her before they proceeded with the experiment. When they completed the experiment they were to complete their booklets and hand them in before going on with preparing a PowerPoint presentation about the solar system to fill in the last few minutes. I noted with interest that most girls went on to the presentation and did not complete their booklets. The teacher reminded them once to complete their booklets and hand them in before proceeding but did not keep at them to do so as she was busy with her own work. Only 15 girls handed in their booklets and these were marked with ticks and a few comments before being handed back. No mark was recorded for the booklet although the teacher saw the girls in the following week during an activity filled week revolving around French Week activities. The unit finished without any form of overview of what had been learnt or why.

The teacher strictly maintained the pace of the unit and what had been taught, often admonishing students to keep together. She conducted whole class discussion frequently, for example, during the design of the experiments about parachutes and paper aeroplanes. However, there was no final reflective discussion about what had been accomplished during this unit and little feedback was given to the students about their progress. The teacher had appeared agitated and dissatisfied with the students' behaviour and constantly sought to keep students on track. As an observer I felt a lack of coherence and purpose about the unit although the individual experiments were quite exciting. Towards the end of the unit I felt that the teacher had too many other things to do involved with administrative duties to do full justice to the teaching of this unit.

## *The Students*

In this section I provide my observations of several students throughout the unit. Some of these students are the same as those reported on in the previous chapter and some are new to the reader.

The first two lessons of the unit involved whole class discussion and activity. My observations at this stage were largely of the teacher and what she was telling the students rather than any single student's progress. It was during the experiments that certain girls came to my attention, some because it appeared that they were not working, others because they were particularly quick or helpful with certain activities, and others because of what they had written or the manner in which they were working with their peers.

In the third lesson, Annie Rush, the hair analysis expert in the integrated unit, appeared to be well motivated and the group at her table were seen to be working methodically at the first experiment. The teacher wanted to record, in a table, each group's average height jumped. In order to graph the results in a scattergram she tried to get the girls to record the class results before getting individuals to call out their results. After getting halfway around the class Claire Beck, the defence attorney in the integrated unit, wanted to know if they were meant to be writing it down because she hadn't done so. She was not the only person not to have paid attention to the teacher and several girls had to get the results from other people before they could go on with their work. Most chose to get the results recorded rather than listen to the teacher about how to do the scattergram so that when they got up to this point they did not know how to proceed and had to ask their peers to explain. Most girls managed to keep up with what they were required to do by asking their peers instead of listening carefully to the teacher. The teacher walked around observing what the students had done and, discovering that everyone had completed the work, congratulated them before moving on to the next activity.

This time, when the girls were asked to write down their own definition of the word gravity, I noticed that Annie Rush was carefully reading what her partner had written before attempting to write it for herself. When it came to peer support she was usually one of the girls helping those who did not understand or had not listened.

However, she needed extra time to get her work written down if required to put things into her own words. Her mother talked about her dyslexia in an interview.

24: Mrs Rush: Annie has got learning difficulties. She's mildly dyslexic. ... She actually reads quite well for a child with dyslexia. She still has a slight problem. Her report was really good but they all say that her oral presentations are so much better than her written work. And when I went up to the interview, the teacher was saying that she writes very simply. I said that I told her to do that because if she starts to write really long sentences she gets lost. None of it makes sense. .... She can't be tired, it gets worse when she is tired or stressed. What I think she does is think, "Oh I think I want it to mean this but she will write something there that she thinks she wants to write."

(Parent Interview with Mrs Rush 13-12-2001)

In the fourth lesson, which included a summary of the concept of gravity, one girl asked me if her statement was correct. This statement was, "The bigger the planet is the bigger the gravity." I explained to her about the fact that we could say something was big because it had a large diameter but when we went to weigh it we discovered that it was much lighter than a ball with a much smaller diameter. It would be more correct to say, "The greater the mass the greater the gravitational pull." The teacher had already addressed this with the whole class but many girls appeared still not to understand that there were correct ways of representing concepts. On reflection this had not been explicitly stated by the teacher but rather implied.

During this lesson, and the following, the girls had to copy down two experiments that the teacher had written up on the whiteboard and then perform the experiments in pairs. Jane, the fingerprint expert from the integrated unit and Debbie Stone, the judge and one of the scriptwriters in the integrated unit, worked together and were the first to start the experiments. They intuitively felt that the second experiment wasn't working and discovered that they were pouring water too slowly and their funnel wasn't sealed, which meant that the experiment wouldn't work as was intended. Another couple, Annie Rush and Claire Beck, were doing the experiment and it was working well. I spoke to Annie about what was happening, knowing that she was dyslexic, and she obviously understood and could explain verbally what was happening, talking about the pressure exerted by the air and the movement of the

water. Her partner Claire, however, kept insisting that air was nothing and therefore was unable to explain her observations. For her the experiment was fun to do but she failed to understand its purpose. In an effort to explain the observations to the class the teacher led a reflective questioning period about these experiments and then set homework to write up the results. She changed her mind, however, because she did not trust the girls to bring their booklets back for the next lesson and told them as much. Claire Beck failed to write anything that showed that she had begun to make sense of the observations herself and she was allowed to remain at this point in her understanding.

The sixth lesson, a week later because of the unscheduled movement of the athletics carnival, started with a spelling test. During the spelling test the teacher put the words into sentences in some instances and for the word volume she gave the sentence, “The experiments we are doing shows that air has volume.” (Field Notes dated Wednesday 14-11-01, Periods 3 & 4) This was the only comment made about the experiments performed in the previous lesson and Claire Beck was still left believing that air was nothing. At the end of the spelling test the results were collected and the teacher proceeded with the next section in the booklet about parachutes. This section required the girls to work on their laptops and it was obvious that Claire Beck did not have her laptop with her as she was working with Casey. They were not really paying attention and were looking at work that was not relevant to the lesson. This went on unchecked and they got further and further behind.

There were a few more disruptions to the lesson with people coming in with messages for different students and then the students were allowed to commence a simple experiment about parachutes. The teacher gave a number of instructions about what materials they could use and what not to use and then let the girls start. I was fascinated to watch Claire Beck and Casey, who had not been paying attention, jump up out of their seats and begin to gather up the equipment they needed. Claire Beck managed to work out that she needed string by watching what other girls were doing. Claire Beck and Casey continued to glean information about what they should be doing by watching other girls and asking questions of them and by the end of the lesson they had satisfactorily completed the experiment. They managed to start a word document on Casey’s laptop, which the teacher had requested, and write up the

experiment, not in great detail but well enough to indicate that she had a good idea of what was going on. They managed to do all of this while interacting with their peers. Towards the end of the lesson the teacher initiated some guided discussion about the variables that could be tested that may affect the rate of descent of the parachute. The girls appeared to have a poor opinion of what their class could achieve compared to the other Year 7 classes as can be seen in their reply to the teacher when she called for the class' attention.

Ms Manor: No more drawing pictures. I expect some magnificent science going on here.

Student: This is the green group you are talking about here.

Ms Manor: I expect the same of all my students. (Field Notes dated Wednesday 14-11-01, Periods 3 & 4)

Claire Beck and Casey were still not appearing to pay attention and the teacher asked Claire to state one of the variables that could be tested. Claire sat silently, smiling and staring at the whiteboard. After a period of intense silence a girl sitting nearby answered for Claire and the teacher accepted this as if Claire had answered and moved on. Claire Beck and Casey were not admonished for not paying attention. They had managed to perform the experiment satisfactorily by using their knowledge of the classroom and social interactions. It appeared that both girls were well aware of their strategy and seemed to feel satisfied that they were somehow tricking the teacher. Speaking to the teacher after the lesson, she was aware of what Claire Beck and Casey were doing but thought that they were bright enough to be allowed to get away with it as were a few other students. She was content that they had chosen to do the experiment and write it up. Claire certainly appeared happier than she had all term without the pressure to work being placed on her, which was apparent in the integrated unit.

In the seventh lesson, the next day, the teacher gave the girls the aim of the experiment they would be doing, "We wish to investigate the effect that changing (a variable) has on the speed at which a parachute descends," (Field Notes dated Thursday 15-11-01 Period 2) and asked them to write up the experiment as far as the results table and show her before going on to do the experiment. Only a few pairs of girls finished ready to commence the experiment this lesson. Claire Beck and Casey

and Annie Rush and Debbie Stone were two of these pairs. Interestingly, in the eighth lesson on the Monday 19-11-01 when they were to do the experiment I noted that Casey was now working with a girl called Hannah Smart. They were methodically making parachutes and recording the time it took for them to drop to the ground. Claire Beck was working with a girl called Lara who appeared to be doing all of the work but when questioned about this she replied that she and Claire had both done the work together. Jane, Debbie Stone and Emelia Stammer, seemed to be working methodically throughout the lessons. I noted with interest that both Debbie Stone and Emelia Stammer had learning difficulties that had been revealed to me in interviews with their mothers and their own knowledge of their difficulties seemed to make them more motivated and determined to succeed. The next couple of lessons passed with the girls concentrating on their experiments and completing their write-ups. They were instructed that they were to leave out the activities related to the behaviour of air when it is heated and to continue with the section about aerodynamics. This period of time served to get all students up to the same point in order to simplify the final activities.

The eleventh lesson consisted of a double period and required the students to fold paper aeroplanes. The procedure for the folding of the aeroplanes was in an interactive file the girls had downloaded to their laptops and was difficult for most students to follow. Jane was observed moving from group to group helping everyone with folding their paper planes whilst the teacher sat behind the table at the front of the room and worked on class lists for the next year. Even the best students were seen approaching Jane for help and she willingly obliged. Annie Rush often called for help and Jane was once heard to say, "Just let me finish mine off." (Field Notes dated Tuesday 27-11-01 Periods 5 & 6) Claire Beck was observed collecting work to incorporate into her portfolio rather than working on the experiment and most girls pulled out pieces of work to put into their portfolios whilst proceeding with the experiments. When Claire finished with her portfolio she got up and moved to the front of the room where she took a tape measure in order to join her group in doing the experiment. This time she was observed joining with Annie Rush and the teacher intervened to ask them to go back to their desk and complete the write up of the experiment first.

The final lesson for this unit saw the girls coming into the classroom quickly and quietly and proceeding with the paper aeroplanes experiment. I observed a pair of girls, Tess and Andrea Vince, performing their experiment outside in the courtyard. Tess was throwing the paper aeroplanes, taking great care to throw them in the same way each time and Andrea Vince was measuring the distance. One particular plane went a long way and Tess told me that it was because of the wind carrying it at the time she had thrown it. Another plane flew in a curve and crashed into the lockers, stopping its flight. The girls asked if they should include that trial in their results because it would look different to what they would expect. At this time I talked to them about what an experiment was and that they should include the results but give explanations in their conclusions. Both girls explained to me verbally what they had noted and could think of many good explanations. Neither girl, however, took very much effort in writing up the conclusion.

Inside the classroom, girls who had completed their experiment were finishing off their booklets to hand in and commencing on preparing a PowerPoint presentation about the Solar System designed to fill-in the final few minutes of the unit as the girls were at different stages of completion. No final reflection of this experiment was conducted and there was no capping-off of the concepts the unit was designed to develop. In the end, only 15 girls out of 27 handed-in their semi-completed booklets and I was left with a feeling of dissatisfaction that the unit had not satisfactorily been drawn to a close.

## **Conclusion**

In this chapter I have attempted to describe my impressions of the science-based unit Above Our Heads. The chapter is divided into two main sections – Background and The Unit in Depth.

In the first section I provided the background of the unit. This included a summary of the booklet or student guide that was used as one of the main resources for the unit. The other resource, aside from the laboratory and equipment used in experiments was the students' laptops. The laptops allowed access to interactive files that were used in place of traditional textbooks. Also included in this chapter is an overview of the unit and the teacher's plans for unit.

The second section is an account of the unit in depth. These writings explore the teacher's presentation of the unit. This is followed by a synopsis of the behaviour of various students throughout the unit with some attempt at discovering reasons for certain types of behaviour and the type of learning occurring.

The following chapter deals with an in depth analysis of the data generated in chapters six and seven.

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## **Chapter Eight: Bernstein's Framework and the Two Units**

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### **Introduction**

The previous two chapters consisted of case studies of the two units, Integrated Forensic Science and Above Our Heads, at The College. In this chapter I provide an analysis of these cases using Bernstein's framework. The analysis begins with framing issues including the regulative discourse and the instructional discourse. The analysis continues with an examination of the realisation rules as various members of the school community observe them. A summary of the framing and realisation issues concludes the chapter.

### **Framing**

Bernstein (1971a; 1971b; 1990; 1996; 2000) used the concept of framing to refer to the controls on communication between individuals in the pedagogic relationship such as between parents/children and teacher/pupils. Control is the way of educating individuals into power relationships by providing examples of the appropriate means of behaviour for different social divisions. It is the end product of this control that results in the realisation rules of the people involved within a social grouping. "Control regulates and legitimises the communication in pedagogic relations" (Bernstein, 2000, p. 12).

Framing is about who has control over:

- the social base, which makes the transmission possible;
- the selection of the communication;
- its sequencing (what comes first, what comes second);

- its pacing (the rate of expected acquisition); and
- the criteria of knowledge.

In general terms where framing is strong, referred to in my schema as  $F^+$  or  $F^{++}$ , the transmitter has control over the selection, sequencing, pacing, criteria of knowledge and the social base. Where framing is weak, referred to in my schema as  $F^-$  or  $F^{--}$ , the acquirer has more apparent control. Framing is grouped into two discourses, the regulative discourse, which involves itself with the social order and the instructional discourse, which is involved in the method of transmission of this social order.

### ***Regulative Discourse - Conduct, Character and Mannerisms***

The regulative discourse refers to that aspect of framing that governs the social order. It is seen in terms of conduct, character and mannerisms and can be discerned by looking at descriptive words about the individual or situation. If framing were strong,  $F^{++}$ , one would expect to find words such as conscientious, attentive, industrious, careful or receptive used in the situation. If framing were weak,  $F^{--}$ , one would expect to find words such as creative, interactive or attempts to make own mark. In this section, I analyse observations and interviews for the principal, parents, teachers and students by assigning a value of framing to each of the key players in the two units of study. As the regulative discourse is a social construct it will apply to both of the units observed. I have accumulated the interviewees' responses when asked to supply descriptive words and phrases about the school and the principal, parents, teachers and students (see Appendix Q) and coded them using the above schema.

### **The School and its Principal ( $F^{++}$ )**

The following words and phrases were offered when all of the interviewees were asked to supply descriptive words of the school or principal: definitive, caring, sharing, fairly balanced, compassionate, religious, responsible, high achievement, it's a high achievers' school, it encourages staff to be risk takers, innovative, encouraging, community feel, family atmosphere, variety of things that are offered, trusting, aggressive and competitive. When teachers were asked to describe the decision making process in the school, they offered the following words and phrases: pre-ordained, autocratic, the pretence of being democratic, quite inflexible, but once again giving the impression that they are being flexible, sometimes ideas are grabbed

on and acted on without really true consideration of implications for the teaching and the learning in the school.

In Bernstein's framework, a weak value of framing would be indicated by the use of words and phrases such as; innovative, it encourages staff to be risk takers, aggressive and competitive. Teachers, parents and the principal all suggested words and phrases such as these. However, a culture that is strongly framed, in Bernstein's framework, would be described using words and phrases such as; pre-ordained, definitive, autocratic, the pretence of being democratic and quite inflexible. The teaching staff, only, offered words and phrases indicative of a strongly framed culture. The discrepancy in words and phrases offered, particularly by teaching staff compared with the principal and parents, can be interpreted to mean that, at an operational level, the school consisted of a strongly framed culture.

I have coded the schools' administrative procedures and management system as strongly framed. The overall impression that the school is trying to impart to the community is an image of a caring, supportive and innovative environment that is weakly framed. However, the regulative discourse that determines teachers' behaviour and teaching styles, and students' roles is strongly framed.

(Words assembled from: Interview with the Principal, 11-10-01; Interview with Ms Felix, 26-11-01; Interview with Ms Corr, 26-11-01; Interview with Ms Barter, 4-12-01; Parent Interview with Mrs Rush, 13-12-01; Parent Interview with Mrs Vince, 28-11-01; Parent Interview with Mrs Stammer, 7-12-01) (see Appendix Q).

### **Parents (F<sup>+</sup>)**

Words used to describe the parents tended to fall into two different categories. Parents were seen as: victims as well as perpetrators; they felt some degree of guilt about their parenting role, were too busy to be involved and were found to be demanding by some teachers (and some of the parents). Most parents were seen as old-fashioned in their view of teaching and learning. Another group of parents were seen as very much involved, demanding in terms of taking up a lot of time and wanting to know a lot about their kids; mothers generally were very hands on; fathers tended to be there supporting the mothers, they were interested in their children's progress, trusting of the school, extremely supportive and very understanding of the amount of things that teachers do.

These words and phrases used to describe the parents place them within a moderately framed culture, according to Bernstein's framework. Words that Bernstein gives to indicate a strongly framed parent group, such as attentive, industrious, conscientious, careful or receptive reflect this group of parents accurately although many of the parents in this study were also interactive and wanting to make their own mark.

(Words assembled from: Interview with Ms Barter, 4-12-01; Interview with Ms Corr, 26-11-01; Interview with Ms Felix, 26-11-01; Interview with Ms Manor, 7-12-01; Parent Interview with Mrs Rush, 13-12-01) (see Appendix Q).

### **Teachers (F<sup>-</sup>)**

Teachers were described by those interviewed as being switched on, very dedicated, hard working, talented, supportive, friendly, caring, communicating well, very capable, enthusiastic, happy, taking an interest in the girls, really worrying about how the children are going, lovely people, committed, professional, very dedicated, altruistic, very supportive of each other, having a generosity of spirit, team-workers, having the gift of empowering and delegating responsibility, and keen to involve students. These characteristics, in Bernstein's framework, would put the teachers in a strongly framed culture. Some teachers described the teaching staff in general as feeling very threatened, needing to market themselves (being entrepreneurial), highly stressed, critical and political. The fact that some of these teachers were marketing themselves in such a competitive environment and that one teacher saw many teachers as wanting to be risk takers and progressive, places them in an awkward situation. The impression is that these teachers would like to belong to a more weakly framed culture but find themselves in the culture of a school, which is strongly framed.

In summary, as a group the teachers belong to a weakly framed culture but find that they have to compromise themselves in order to fit in with the more strongly framed culture of the school.

(Words assembled from: Interview with the Principal, 11-10-01; Interview with Ms Corr, 26-11-01; Interview with Ms Felix, 26-11-01; Interview with Ms Barter, 4-12-01; Interview with Ms Manor, 7-12-01; Parent Interview with Mrs Stone, 27-11-01; Parent Interview with Mrs Rush, 13-12-01; Parent Interview with Mrs Smart, 28-11-

01; Parent Interview with Mrs Stammer, 7-12-01; Parent Interview with Mr and Mrs Vince, 28-11-01; Student Interview with Annie Rush, 19-11-01) (see Appendix Q).

### **Students (F<sup>7</sup>)**

When asked to suggest words and phrases that would best describe the students at the school, two clusters of students emerged. There was a smaller cluster of students who were described as not geared towards getting marks, not geared for learning, “middle fluff”, hated work, had no sense of taking the initiative, were committed to doing what’s best for themselves, were quite needy, very highly strung, slightly on the wild side, very slack and fighting it all the time, doing as little as possible and when they were in their groups, obeying a “pack” mentality. Some people felt that there were two sides to some of these students; very polite, caring and responsive when alone but in their group, they became rude, disgruntled and very negative.

The other larger cluster of students were described as exuberant and motivated, very questioning, good at sifting through what’s important, independent learners, risk takers, confident, self-centred, happy, chatty, caring, enthusiastic, vital, competitive, enjoying what’s offered at the school, involved, driven, focused, energetic, responsive, excited and co-operative.

When attempting to allocate the students a value of framing, according to Bernstein’s framework, the fact that many of the students are described as independent risk takers who question authority would situate these students in a moderately weakly framed culture. As many of the students try to rebel and be individuals but find it difficult in the culture of the school they find themselves I have allocated a value of framing indicative of this dilemma.

(Words assembled from: Interview with Ms Corr, 26-11-01; Interview with Ms Felix, 26-11-01; Interview with Ms Barter, 4-12-01; Interview with Ms Manor, 12-10-01; Interview with Ms Manor, 7-12-01; Parent Interview with Mrs Stone, 27-11-01; Parent Interview with Mrs Rush, 13-12-01; Parent Interview with Mr and Mrs Vince, 28-11-01) (see Appendix Q).

### ***Instructional Discourse***

The other aspects of framing, such as the selection, sequencing, pacing and criteria of knowledge, compose the instructional discourse. According to Bernstein (1971a;

1971b; 1977; 1990; 1996; 2000) the instructional discourse is always embedded in the regulative discourse and the strength of framing can vary between the elements composing the instructional discourse and also between the two types of discourse. Strong framing, referred to as  $F^{++}$ , would be seen when the transmitter (the teacher) had the greatest degree of control in the situation and weak framing, referred to as  $F^{--}$ , would be seen when the acquirer (the student) had the greatest degree of control. It is possible to have strong framing, ( $F^{++}$ ), over instructional discourse (where the teacher makes the choices) and either strong ( $F^{++}$ ) or weak ( $F^{--}$ ) framing over the regulative discourse; however according to Bernstein, where there is weak framing over the instructional discourse (where the student is in control of the choices) there must also be weak framing over the regulative discourse.

Several years experience with the integrated unit of study has shaped the teachers pedagogical approach. This, together with the regulative discourse of the school, has strongly influenced the instructional discourse for the units observed. A quote from the year level teacher puts this into perspective.

360: Ms Manor: What I've found at this school is that initially we did integrated units with learning how to do something, so it was all new. The emphasis was that they would learn how to do this through that particular unit. And I suppose my leanings as a classroom teacher is that they don't learn it as well, don't learn as much and those sorts of things always make me feel quite anxious. So we have changed it so that instead of having an integrated unit to teach them something, we teach them something and use an integrated unit to expand on that or to consolidate it or to finish it off, to give them an end product for their work. (Interview with Ms Manor, 12-10-2001)

Without the use of Bernstein's framework I may be tempted to interpret this statement in a different light. Prior to this analysis I was tempted to think that the teachers may have chosen to teach the unit the way they did because this was easier for them. I now have a better insight into the reasons why they have adapted the unit the way they have, given the culture of the school revealed to me through the use of Bernstein's framework.

What follows is an analysis of the instructional discourse of the Forensic Science Integrated Unit and the discipline-based unit, Above Our Heads.

### **The Selection of the Communication**

If the teacher has the greatest control over the selection of what is to be learned then the framing is considered to be strong. The greater the degree of influence the student has over the selection of what is to be learnt the weaker the framing becomes.

#### ***The Integrated Forensic Science Unit (F<sup>+</sup>)***

In the Integrated Forensic Science Unit the students had very little control over the nature of what was to be learnt. The teachers had, in the weeks prior to the unit, taught the skills and content that they wanted the students to utilise in the integrated unit. For them, the purpose of the unit was for the students to develop some knowledge of how these skills could be useful to them outside of the classroom and to encourage them to transfer content and skills across the discipline-based subject areas.

175: Ms Corr: Integrated I think is when you, I'll talk specifically about integrated subjects, when you combine them with the view to demonstrating or helping the girls to understand the transfer of skills and to make things not subject specific but actually to hopefully enhance their relevance to the girls so that they can, you know, it's not just English or maths but that it is an important skill to have and when I think of integrated I think of stronger as well. (Interview with Ms Corr, 26-11-01)

The teachers did not incorporate any choice on the part of the students as to the overall content of the unit. However, they did make allowances for their fellow teachers, from different discipline-based subject backgrounds, to emphasise their own subject area over others.

212: Ms Manor: I actually quite like the idea of the teacher's personality coming through and that they respond to the personality of their class. ... You've got to be fluid; you've got to be understanding of the fact that each teacher is different. Probably it wouldn't hurt to have ... everybody putting in their bit then at least you know that the part that they put in with their class is done the way they wanted it to be and another

class will have their teacher's component done the way they wanted it to be done so at least you get a quarter of it done the way it was originally intended and the rest of it should be sufficiently stand alone. (Interview with Ms Manor, 7-12-01)

The students' only major freedom of choice or control over the unit was to elect the role they would like to take on within the unit. The choice of this role determined what they were required to do for the unit, although some sections of work were common to all roles. In the class, however, the teacher manipulated this process to some extent to ensure that she had suitable students in the key roles of scriptwriters and expert witnesses. One of the girls felt that she had been manipulated into a role she really didn't want. The girl did not complain and took on her role with great confidence and was a major contributor to the unit. In the interview I conducted with her later, she said:

10: Jane: I didn't really like being a forensic person so I tried to do so many other things and she said that, "I want you because you're such a good student that no way I'd let you ever do the others."

11: Researcher: Oh, so did you feel a bit, sort of a little bit upset? (Jane nods her head in the affirmative.) You did. (Student interview with Jane, 20-11-01)

The students also had some control over how they conducted this research and utilised other resources. For example, some students used a street directory and called various bus and ferry services to find information to extend their answers to the mapping exercises. In the lesson on Friday 19 October, 2001 one girl asked me for a street directory so that she could work out the distance required using the scale on the map in order to calculate a distance (Taken from Field-Notes dated Friday 19<sup>th</sup> October 2001, Periods 1,2,3,4 & 5).

The overall lack of control over the content of the course by the student calls for a value reflecting strong framing, however, the ability to exert a measure of choice over the content individuals covered served to weaken this value slightly. I have therefore chosen a value of F<sup>+</sup> for this unit.

### ***Above Our Heads (F<sup>++</sup>)***

The Above Our Heads Unit involved minimal choice on the part of the students. They were told what they were going to do, from content through to skills and experiments and had little room to diverge from this pathway. The use of resources was strictly monitored and students were closely regulated as to what content they covered.

166: Jane: In 'Above Our Heads' we've got all this information for it that's already there waiting for us. When we had to do forensic science we had to find most of the information and do it by ourselves. (Student Interview with Jane, 20-11-2001)

This lack of choice calls for a very strong value of framing, hence F<sup>++</sup>.

### **The Sequencing**

If the teacher determines the order of what is studied then framing is strong. The more control the student has over the determination of the order, the weaker framing becomes.

### ***The Integrated Forensic Science Unit (F<sup>-</sup>)***

This unit allowed for some degree of flexibility in the sequencing of the work. Obviously some things had to be done before others, such as collating the evidence before conducting the trial, but the students were left to determine when they did this in the allocated two-week time frame.

The only exceptions were the few deadlines provided by the teacher, such as the date of the trial and the bus trip for the map reading activity. The students were otherwise free to decide the order of their work.

121: Annie Rush: The forensic unit has been really good because it was like you could, you do it all by yourself, they just say you've got a time limit while you're here and you have to learn all about it and you have to research it yourself. (Student Interview with Annie Rush, 19-11-01)

This format then would allow for a weaker value of framing compared to the selection of the communication, hence F<sup>-</sup>.

### ***Above Our Heads (F<sup>++</sup>)***

In this unit the teacher strictly monitored the students so that they all did the work in the same order. I recorded in my Field Notes an example of the teacher trying to get everyone working together in the unit Above Our Heads. She was heard to say, “If we can all do this at the same time it will save a lot of time” (Taken from Field Notes dated Thursday 1-11-01, Period 5 & 6).

The students worked sequentially through the material to build content and skills, one upon the other in a predetermined order. This would then demand a value of F<sup>++</sup> for framing.

### **The Pacing**

If the work is carried out at the pace of the individual then framing is weak. If the teacher dictates the timing of what is to be done then the framing is strong.

### ***The Integrated Forensic Science Unit (F<sup>-</sup>)***

The students were only given a couple of deadlines within the two-week period. For the majority of the time they had control over what they chose to do and when they chose to do it. They could, for example, leave the classroom to take surveys, use the library or the telephone at their discretion. As one student put it:

186: Jane: Well, when we did it we could choose whenever in the forensic unit it as long as it was done by a certain time. (Student Interview with Jane, 20-11-2001)

The teacher also commented about the pacing of the unit.

212: Ms Manor: We do structure the unit so that the students can do it themselves. ... I've structured for green group big chunks and made it explicit what I wanted because I had to. Whereas other groups don't need to have that done. (Interview with Ms Manor, 7-12-2001)

Because the students had significant control of their own pacing in this unit I have allocated a value of F<sup>-</sup> to this aspect of the framing of the unit.

### ***Above Our Heads (F<sup>++</sup>)***

For this unit the students had minimal control over the pacing.

186: Jane:                    But with this [Above Our Heads] it was a lot more regulated [the pacing], I think that's the right word. (Student Interview with Jane, 20-11-2001)

For the sake of efficiency the teacher felt it necessary for all the students to be at the same place in their booklets at the same time. Thus, I have thus allocated a value of F<sup>++</sup> (strongly framed) to the pacing of the unit.

### **The Criteria of Knowledge**

In Bernstein's classificatory system, the criteria of knowledge is included in the instructional discourse, which is responsible for transmitting specialised proficiencies and their relationships to each other. Although the instructional discourse is embedded in the regulative discourse, the regulative discourse or social order is intuitively likely to influence the manner in which we teach and our ideas as to what constitutes valid knowledge. At the same time, what we teach and the way we teach it has an influence on the development of the school culture and the culture beyond the school walls. It is this cyclic and dynamic nature of the discourses, each influencing the other, that bears remembering when observing classrooms.

In order to better define the criteria of knowledge I chose to use some of the educational dialectics suggested by Belenky, Clinchy, Goldberger and Tarule (1997) (see Appendix R). I have taken those that appeared most relevant to this study and explained how they reflect the terminology used by Bernstein in relation to framing.

1. Process Oriented (means) versus Goal Oriented (ends).

What are the aims of education? Is the main point to an education the endpoint or is it the development of the skills and knowledge along the way that are of greater importance? In Bernstein's terminology, a leaning towards the process orientation would suggest weaker framing whereas a leaning towards a goal orientation would suggest stronger framing.

2. Discovery (constructed knowledge) versus Didacticism (received knowledge).

How is knowledge viewed? How is the act of becoming a "knower" explained? In Bernstein's terminology, a leaning towards the learner constructing his or her own knowledge would indicate weaker framing

whereas a leaning towards the teacher being the imparter of knowledge would favour stronger framing.

3. Related (synthesis) versus Discrete (compartmentalised, strong boundaries).  
What is the relationship between learning and “life”? A belief that students should explore relationships and develop critical thinking about learning and life, as would be seen in the related pole of the dialectic, indicates a weaker value of framing whereas, strong orientation towards discrete or compartmentalised subject areas is an indicator of strong framing.
4. Being with Others (collaborative, cooperative) versus Being Alone (solitary, competitive).  
What arrangements for learning are preferred? Have been experienced? A belief that knowledge is better served in learning to cooperate and work together would indicate weaker values of framing whereas stronger values of framing would be indicated by a belief that a student learns best with his or her own solitary efforts.
5. Breadth (generalist, dilettantism) versus Concentration (specialist, narrowness, blinders).  
What is the range of interests in learning? An attempt to broaden the educational experience of the student would indicate a weaker value of framing whereas an attempt to restrict learning to very tightly controlled, narrow areas of study would indicate a strong value of framing.

These educational dialectics can be thought of as guides to indicate where the teachers’ belief systems lie in terms of what types of knowledge are important for students.

I have attempted to use these dialectics as referents for different types of knowledge when analysing the reasons for teachers choosing particular styles of formats for their lessons within the two units observed. The same teachers had different expectations of each of the units based on different criteria of knowledge that were important to them and utilised the units’ differences to enhance overall aspects of the students’ learning.

It is important to bear in mind that the criteria of knowledge have been important in formulating the philosophy of the middle school. The two units are considered by

teachers to be complementary to each other in relationship to the school's philosophy.

### ***The Middle School***

The middle school philosophy embraced a strong emphasis on pastoral care and social skills. The emphasis on such skills resulted in the use of small group pedagogies, which favoured the educational dialect of "Being with Others". Teachers who supported this philosophy were specifically selected to teach in middle school.

68: Ms Manor: I think the reason they set middle school up in the first place was because of this perceived need of teaching middle school students differently and to meet their social and emotional needs as well as their academic needs. ... What they have been doing is selecting staff such as myself, a raft of people, who are employed specifically as middle school people. The idea behind that is to build a strength within the staff teaching that have the middle school ethos ingrained in them. People like me for instance who strongly believe in it. (Interview with Ms Manor, 7-12-01)

Ms Manor expressed the opinion that it was time for the middle school "to find that middle ground where there's academic rigour as well as (caring for the) emotional needs (of the student) and balance the tension between those different needs" (Interview with Ms Manor, 7-12-01, (68)). She also felt that teaching a lot of content knowledge to students in middle school was not going to be of assistance to them when they sat their external examinations. What would be of greater importance to their education is the development of a sense of appreciation of science as a subject. Much of the emphasis in middle school was on teaching real life skills and turning the student into a life long learner. Ms Manor felt that by incorporating a breadth of experiences (see educational dialectic number 4) in the student's learning, allowance was made for each student to realise her potential (294). She did however believe that students needed "the fundamental skills of literacy and numeracy and confidence" but "as a middle school (they needed to) aim for the higher levels of thinking, ... there's got to be an exploration of the thinking process and what's behind it" (108). These inclinations appear to favour the educational dialects of "Related" and "Process" while leaving open the decision about adopting a "Discovery" or "Didactic" approach to the classroom structure. However, Ms Manor

still had difficulties conceiving of a different way to teach and kept coming back to the assumption that students needed to achieve a certain amount of specific content before leaving school.

376: Ms Manor: I know how hard it was teaching maths and that sort of feeling that I'm inadequate because I'm not really a maths person and what if someone discovers that I don't really know anything? It's quite intimidating because we do come from this culture of what content have they learnt. ... I don't know that you could necessarily do it differently and I don't know if you would want to do it differently. Like are you doing it differently just for the sake of it? The whole point of going to a secondary school is so that you get a specific content knowledge. (Interview with Ms Manor, 12-10-01)

Other Year 7 teachers also expressed the opinion that the students needed "the content knowledge of the subjects across the curriculum" first, followed by "developing sensitivity to their peers" (373) and developing "collaborative learning skills" (353) (Interview with Ms Felix, 26-11-01).

Students expressed the opinion that they needed to learn the core subject areas but were more adamant that it was the group learning skills that helped them achieve the most from their learning (Student Interviews with Annie Rush, 19-11-01 (55), Claire Beck, 19-11-01 (111) and Debbie Stone, 23-11-01 (225)). Their parents were more adamant that subject content knowledge was important whilst acknowledging the importance of cross curricula and real life skills. One father expressed the opinion that universities had chemistry and physics as pre-requisites, not because they wanted students who already had a basic knowledge of these subjects but because the "top students" did these subjects and therefore it was necessary for their daughters to "play the game" and do these "more demanding subjects" (Interview with Mr and Mrs Vince, 28-11-01 (352)).

At first sight the emphasis in the middle school was on collaborative learning, the development of skills from engaging in the process, students discovering for themselves and building their own frameworks, the linking of knowledge with real life and a breadth of experiences to provide a holistic education. All of these knowledge structures are reflected in the weaker framing of the educational

dialectics, providing an environment that would seem to support integration. However, the threat of being perceived as inadequate by senior schoolteachers presented a dilemma for teachers who found themselves forced to support a more didactic approach to teaching than their philosophy indicated. This gave rise to the search for a compromise situation where a variety of approaches to teaching were explored.

459: Ms Corr: The frustrating thing for us as a team has been at the beginning of every year we set up the key skills that we really want the girls to achieve and then we all come from our areas and try and work out how we are going to do that and we've all got such constraints from our actual subjects. ... It would be good if you could pick us all out and put us in the middle with the skills and all those sorts of things that we want the girls to develop and learn and from there just go, "What are we going to do?" Do you know what I mean? Without having the constraints. (Interview with Ms Corr, 26-11-01)

### ***The Integrated Forensic Science Unit (F)***

Teachers used this unit as a "stepping-stone" (Interview with Ms Manor, 7-12-01 (140)), or capping stone, as I prefer to call it, to enhance skills learned in the individual discipline-based units preceding the Integrated Forensic Science Unit. Teachers hoped to draw together the students' knowledge from the compartmentalised, discipline-based areas and provide a forum for the students to experiment with these new found skills, transfer knowledge to a different forum and to enhance recall of various pieces of content knowledge. This is very similar to the Middle School Construction Model recommended by Flemming (1993). Teachers also hoped to link what was taught in school to the outside world.

The middle school teachers had a strong belief in students constructing their own knowledge, an emphasis on processes rather than ends, the development of team skills and the ability to synthesise knowledge. These capabilities equate to the weaker framed educational dialectics. Integration was seen as a way of developing these capabilities.

In some way the strong belief in these more weakly framed aspects of educational dialectics provided justification for the integrated units. The unit also allowed students to use the facts that they had been taught in science.

80: Ms Manor: We spend all of our time teaching the facts and not enough on using the facts. This integrated unit provided the opportunity to do this. (Interview with Ms Manor, 31-10-2000)

Ms Manor justified the unit by acknowledging that it had helped the students to do particularly well in their science test.

132: Ms Manor: The actual science side of it [the Integrated Forensic Science Unit] is actually quite limited, it's more social studies, a bit of maths and a reasonable amount of English, all tied into that. They just used what they did in science as a base and everything else gets tied into it. It's not a unit where they learn more science. Although the interesting thing was that even though they had had a holiday and then two weeks of the unit they still did really well in the [science] test. It really reinforced what they had done. I don't consider it to be a science unit as such. (Interview with Ms Manor, 7-12-01)

The equally strong belief in the strongly framed components of discrete knowledge, combined with perceived pressure from the senior school, served to restrict the amount of time that could justifiably be devoted to integrated units. Parents' views seemed to support this notion.

287: Mr Vince: As a one-off type of exercise for a couple of weeks per term, to do something like that, say towards the end of the term to bring everything together is good but to have it all year I don't think would be a very good idea. (Parent Interview with Mr and Mrs Vince, 28-11-01)

Integrated units at this school were developed within a climate of strongly held but opposing views of the criteria of knowledge. Most of the criteria used to justify the format of the integrated unit originated from a belief in the more weakly framed educational dialectics but the more strongly framed dialectics served to restrict the overall format and time allocated to the unit. Overall, therefore, the criteria of

knowledge on which the teachers based their development of the unit could be considered weakly framed, hence  $F^-$ .

### ***Above Our Heads ( $F^+$ )***

The purpose of this science-based unit was to teach new concepts related to the topic of flight, such as, gravity and aerodynamics, and to reinforce experimental technique. The students were given a copy of the relevant outcomes to be assessed in the unit (see Appendix O) on the inside cover of the unit booklet. Students were expected to enhance their understanding of variables, data collection, trials, averages, summarising and explaining patterns in their data and improve their investigations. In terms of the selection, sequencing and pacing of the work the unit was highly structured and rigid, not allowing for differences in student abilities.

186: Jane: Well, when we did it we could choose whenever in the forensic unit it as long as it was done, by a certain time. But with this it was a lot more regulated, I think that's the right word. (Student Interview with Jane, 20-11-01)

All students were expected to be at the same place in the unit booklet at the same time and to perform the experiments simultaneously. The teacher provided one set of instructions to the whole class before each experiment and discussed the students' answers to questions in the booklet as a class group. Students found this unit to be more rigidly structured than the Integrated Forensic Science Unit. All the necessary information to complete the unit was provided to the student by the teacher limiting the amount of discovery learning and hence the degree of "challenge" in the work.

166: Jane: In 'Above Our Heads' we've got all this information for it, that's already there waiting for us. When we had to do [the integrated] forensic science we had to find most of the information and do it by ourselves. (Student Interview with Jane, 20-11-01)

216: Debbie Stone: Um, the integrated unit was like a challenge, 'cause you had to get, yeah it was like a challenge and this [The Above Our Heads Unit] is just like work. And it's like, this is much harder because everyone's helping you before, all the teachers

were helping you and the students were helping you, the stress wasn't all just on you.

And now it sort of is. (Student Interview with Debbie Stone, 23-11-01)

While the unit was supposed to fit in within the philosophy of the middle school, in keeping with the dialectics of discovery learning, it became more an exercise in didacticism. The only concession to “discovery” was the inclusion of experiments related to the students' own experiences.

69: Annie Rush: In normal lessons you don't get the chance to be more practical 'cause the lessons are, in science we do a lot of practical lessons like actually do stuff, like experiments and everything. I reckon that it's, like, that's the only class that we get to experiment in most of the time so I think science is pretty good 'cause you get to learn more and actually experience it. (Student Interview with Annie Rush, 19-11-01)

As the unit was held in the final few weeks of term four there was an air of expediency throughout the lessons. The teacher was anxious to keep all girls working quickly and at the same pace. As an observer, I felt that little time was available for reflection and ensuring that individuals had grasped the concepts being taught. There were chunks of lecture type instructions followed by students performing experiments and sessions where students worked from laptop files to answer questions in their unit booklet.

218: Debbie Stone: [In the “Above Our Heads” unit we have to] answer these questions from nine to eleven, now. (Student Interview with Debbie Stone, 23-11-01)

The teacher would, as a whole class, quickly go over the answers to the questions and collected the booklet and the experimental write-ups for assessment purposes. The teacher was responsible for the transmission of knowledge, hence fitting the criteria of didacticism.

Whilst girls were performing the experiments I walked around observing and questioning them about what they were doing, why they were doing it and asking them to explain some of their observations. Some of the girls gave quite sophisticated answers. Tess, for example, described her experiments with a number of different paper aeroplanes.

Another plane flew a long way and I said, “That was a good one.” Tess replied that the wind took it. I told her to take note of that because the results would be affected. Other planes flew to the left or right because “the folding wasn’t done all that well and also their noses had been damaged due to frequent collisions with the ground.” [reported to me by Tess]. (Field Notes dated Friday 30-11-01 Periods 3 & 4)

I noted that she did not write any of this explanation in her write-up of the experiment. Later, I asked the teacher about this because I was concerned that a valuable “discovery” learning experience was being lost. The teacher suggested that it was probably her fault as there was insufficient space in the booklet for any detail in the write-up.

[Ms Manor] she mentioned that they probably wouldn’t write much because she had only given them a few lines! [“It’s my fault.”] (Field Notes dated Friday 30-11-01 Periods 3 & 4)

It could be that Ms Manor was more concerned with the process of the experiment rather than the end point, the write-up. I observed the teacher describing the different factors that may affect the results and asking for them to be included in the students’ write-ups. However, the teacher did not follow this up and I doubt that more than a handful of students listened to what the teacher had said. The impression I gained was that the students couldn’t be bothered and it didn’t really matter. I commented in my Field Notes:

Girls are printing off two copies of their “Parachute” experiment. Some have not written a detailed method. Ms Manor is getting them to add to their report.

Mary has quite a nice report that concludes with – “the more weights the faster the parachute falls”. I ask her to explain her graph to me as it actually shows the reverse. She stands there silently looking at the graph and tries to say that “the more weights the faster it falls” but she is smiling and I query if this is actually what the graph says. She smiles, looks embarrassed and admits “No”. I leave her but I don’t think she fixes it up as she has already printed out her two copies in colour. (Field Notes dated Thursday 22-11-01 Periods 3 & 4)

Mary did not fix up her report and the teacher did not follow up the problem. The report was left as if it were correct.

I noticed that the girls rarely elaborated on their answers, choosing to submit short sentences at best. I did not see any encouragement for students to follow through with their answers and concluded that this was partly because of a lack of time due to the proximity of the end of the year.

The unit appeared to be partially constructed taking into account the criteria of knowledge of discovery learning, the emphasis on the process, showing the relationships to the students' lives, providing a breadth of experiences and allowing the students to learn from each other and further develop their group skills. All of these criteria belong to the group of knowledge-based criteria that are weakly framed. However, possibly due partly to a lack of time and the proximity to the end of the year, the unit evolved around the criteria of knowledge that are more strongly framed, in particular, the belief that the teacher is the transmitter of knowledge. Overall, in terms of the criteria of knowledge, I have rated the unit as F<sup>+</sup>.

## **Realisation Rules**

Realisation rules refer to the ability of the person to communicate what they know in a manner that is acceptable and understandable to the others within the culture, in the case of this study, of the school environment. Bernstein (2000) postulates that in order for the framing and classificatory criteria to be effective there must be some form of recognition of these structures between members of the school community. There should also be a realisation of these structures, or an ability to put the meanings together to communicate them to others. For the individual, classification creates the recognition rules that enable the person to position him/herself in relation to the context and framing regulates how the meanings, developed from the recognition rules, are put together and transmitted to other individuals.

The instructional discourse aims to give the acquirer the necessary skills to communicate within the particular subject area in question. This means that, in order for the school to operate in the manner it hopes to, the members of the school community need to be able to understand the intent of the school, within each subdivision of the school, and the students need to be able to understand what it is they are being asked to do and comprehend. In short, there must be a common language.

As with any foreign language it is often easier to understand what is being said than to actually explain what it is you want to say. Understanding the ‘what is being said’ equates to the recognition rules, and being able to use the language and put into words what it is that you want to say is equated with the realisation rules. Without both of these types of rules, members find that there is a mismatch between themselves and the orientation of the school. In this section of the chapter, I analyse the data with respect to the realisation rules possessed by the principal, parents, teachers and students.

### *Principal*

The principal had excellent recognition of both extremes of Bernstein’s codes (i.e., the integrated code and the collection code). However, his ability to translate these recognition rules into realisation rules was not so strong. He had purposely built into the middle school philosophy facilities for enhancing the integrated code. However, his belief in the disciplines persuaded him to lean towards the collection code. The reality in the middle school was, that although aspects of integration were recognised and highly desired, there was considerable force preventing the development of this way of conducting learning.

Teachers were encouraged to be innovative and creative with their approaches to student learning. However, when it came to implementing strategies to match this philosophy they met many restrictions. They complained of being “treated like naughty little school kids ... have(ing) to be on campus from 8 a.m. to 3:45 p.m.” and that the principal did not have a true recognition of “what he was asking his staff to do.” Some teachers resigned during the year of the study. “[S]ome had no new job to go to but they were unable to cope with the commitment required and have any sort of life outside of school” (Field Notes entitled Thursday 22-11-01 Periods 3 & 4). Other teachers marketed their subject quite aggressively to students for fear of losing their job (Interview with Ms Barter, 4-12-01 (77)).

While teachers were encouraged to take students on outside school excursions, timetabling and other teacher responses made this very difficult (Interview with Ms Barter, 4-12-01 (181)). While the timetable could potentially be collapsed it often wasn’t because of the perception that highly structured, discipline bound subject

areas take precedence. Teachers were reluctant to give up their valuable curriculum time for fear of being judged inadequate if they did not teach all the syllabus content.

The realisation of the principal's views favoured a structured and traditionally discipline-based curriculum despite the inception of a separate middle school with a different kind of philosophy based on meeting the social and emotional needs of the students. The following quote from a teacher interview reflected how some middle school teachers viewed the principal and the school.

111: Ms Corr: (Laughter.) I think um, autocratic, um, can I give you phrases? This is going to sound very harsh, the pretence of being democratic, um, quite inflexible, but once again giving the impression that they are being flexible, um, very much um, (pause) not also quite apparently um not slapstick but um, just that I don't sometimes think that, I think sometimes ideas are grabbed on and acted on without really true consideration of implications for the teaching and the learning in the school, that's what I think. (Interview with Ms Corr, 26-11-01)

The principal's realisation rules encouraged him to establish a vertically structured hierarchy that favoured discipline-based subject divisions and required students to participate in a large number of co-curricular activities to achieve, what the principal described as, a holistic education. For some students this was quite draining. Other students, who were healthy, quick with their work and full of energy, had better opportunities to develop a more holistic education program. Teachers were also strongly encouraged to take on additional programs, placing extra pressure on their workloads.

### ***Parents***

Parents, in general, were cautious about their children's education. They clearly recognised both perspectives of an integrated code and a collection code. However, they were reluctant to expose their children to educational risks. They wanted anything that was "different" to come with guarantees.

319: Mr Vince: Maybe the school could underwrite it that if they don't come up to scratch towards the end then there's extra tuition. You know, in the last year. (Parent Interview with Mr and Mrs Vince, 28 11 01)

Parents said that they trusted the teachers as professionals to decide what was best educationally for their children (Parent Interviews with Mrs Stone, Mr and Mrs Suit, Mrs Smart, Mrs Stammer, Mrs Beck and Mr and Mrs Vince). Most parents reflected realisation of these values by sending their children to the school to be educated by the teachers without question. A few parents acted on their realisation by transferring their children from The College to a more academically appropriate school (personal communication).

The College had long student waiting lists (related to me by the Principal) illustrating a realisation and appreciation by parents of the values of this particular school. Many parents that I spoke to truly believed that you get what you pay for and therefore the education at this school must be good. Parents expressed the view that while there were aspects of the school that they didn't like, the teachers were professional and concerned with the welfare of the students. Although the parents paid high fees, they felt that they received a superior education for their children than would be achieved through the public system.

The parents of the girls with learning difficulties were very involved in their children's education. These parents worked with their children to help them develop coping skills to circumvent their difficulties. This is a form of parent realisation, that their children needed assistance. My impression was that these children seemed to be aware of coping skills, particularly in reading and writing.

The realisation rules that the parents possessed were expressed in their general satisfaction with the school. For the most part, they did not question the education that their children were receiving. Some complained about minor aspects, largely revolving around inconsistencies in discipline, awards and the use of group work but generally they were very happy with the school and showed this keeping their children at the school and paying the high fees.

### ***Teachers***

The middle school teachers often appeared ambivalent about their role in the school. Many felt threatened and insecure in their position at the school (Interview with Ms Corr, 26-11-01 171)). They were overloaded and becoming frustrated with the additional demands placed on their time (Interview with Ms Manor, 12-10-01 (305)). They felt largely powerless in the decision making process, particularly those aspects

that were directly relevant to what they believed were important to teaching and learning in the school (Interview with Ms Barter, 4-12-01 (73) and Ms Corr, 26-10-01 (67)). They were frustrated by the perceived need to meet syllabus demands and the dilemma this caused when trying to develop other aspects of the students' learning (Interview with Ms Corr, 26-11-01 (459 & 463) and Interview with Ms Manor, 12-10-01 (98-100)). They felt self conscious about their own expertise as a teacher.

They were, however, conscious that they had more freedom to do what they saw fit in the middle school. They recognised that there was some scope for creative and innovative teaching approaches (Interview with Ms Manor, 12-10-01 (286)). The senior school head of science was confident in the middle school science team of teachers and supported the middle school head of science (Interview with Ms Manor, 7-12-01 (14-20)). The English teacher also said that she could count on the support and encouragement of her head of department (Interview with Ms Corr, 26-11-01 (71)). The middle school teachers were also positive about the behaviour of the students and the opportunities to extend their own concepts of good teaching. All of the teachers involved in the Integrated Forensic Science Unit enjoyed support from their peers in the teaching team and were enthused by this approach (Interview with Ms Manor, 12-10-01 (282)).

There appeared to be some degree of ambivalence about academics. The teacher observed remarked to me after listening to a quote by Bernstein about the conditions he felt necessary for integration to work successfully, " I actually agree with most of what he said. Not sure how I can necessarily make sure as the team leader that all those things happen. That's because we live in a real world instead of an academic one" (Interview with Ms Manor, 7-12-01 (220)).

### **The Integrated Forensic Science Unit**

The Integrated Forensic Science Unit had evolved over three years. It was initially used as a theme to teach certain skills within each of the discipline-based, core subject areas. In the second year it became a more integrated unit where the timetable was collapsed across all of the four, core subject areas and the students had the one teacher for two weeks. During this time they were required to write a story involving a crime, convert it to a script for a trial and incorporate the evidence needed to prove

the case. The unit culminated in a trial and dramatic presentation of the story (Pilot Study).

By the third (study) year it had evolved further. The timetable was still collapsed and the students were encouraged to see their subject teachers about difficulties rather than restricting themselves to the one teacher. For example, they were encouraged to see their science teacher for any problems relating to the evidence. In reality this did not often happen for logical reasons.

To streamline the process, the teacher supplied the story. The students were asked to convert the story into a trial incorporating the evidence. There were several sections of work for the students to complete, such as, mapping, decoding, a crime survey, character profiles and newspaper articles about the crime.

The three other teachers comprising the teaching team commented that they thought the unit was less integrated in this year compared with the previous year and yet the teacher in charge felt that it was more integrated. This reflected their different views about integration. The teachers who felt that it was less integrated pointed to the inclusion of the separate activities relating to the discipline-based subjects. One teacher (Interview with Ms Corr, 26-11-01 (187 & 195)) said that she would like the students to develop the work in consultation with teachers of their choosing. She felt that the increase in structure and subject requirements detracted from the idea of the students developing the unit themselves. Another teacher (Interview with Ms Barter, 4-12-01 (217)) said that there needed to be greater child-centeredness, allowing the students to take more responsibility in the development process. However, they all (Interview with Ms Corr, 26-11-01 (263-267), Ms Barter, 4-12-01 (225) and Ms Felix, 26-11-01 (168 & 236)) appreciated the efforts of the team leader because she had such good ideas. Also, they did not have enough time to work through the unit themselves because of an already busy schedule.

168: Ms Felix: No, I really probably let things down. Ms Manor was great so I didn't worry but now that I've run out of time I wish I'd monitored the graphing part more because we haven't done enough of constructive survey and graphing. The survey was pretty stupid, the questions. .... 248: They probably would have been better off

given no questions and last year they weren't and they managed it quite well. (Interview with Ms Felix, 26-11-01)

Communications among team members show the realisation rules possessed by the teachers. Ms Manor was the team leader and accepted ultimate responsibility for the unit. Others were comfortable in leaving the development of the unit for her to do and help with things that required less thinking. The other teachers did not have the time to be more collaborative about the process. The teachers accepted the underlying structure and goals of the unit, to develop social and technical skills, motivate students and enhance content knowledge.

The structure of the unit reflects the realisation rules, in particular, of the team leader. Ms Manor used the unit in a form that I would describe as a capping stone unit, whereby students were given the opportunity to develop organisational and social skills and to transfer the discipline-based knowledge to other domains. Students worked at their own pace in a more relaxed time schedule than usual and were responsible for developing much of their own work. They were required to complete self-contained units of work within the overall unit.

The self-contained sections of work on mapping and decoding were integral to the court case and the development of the trial. The girls were encouraged to work in groups but were free to move between groups and to work on their own if they chose (Interview with Ms Manor, 7-12-01 (200)). Most girls were observed mixing solitary work with working in various small groups. This flexibility was seen as an important aspect of the unit by the teacher and contributed to its integrated nature.

The way in which the unit evolved illustrates Ms Manor's realisation rules. She had strong recognition of both integrated and collection codes, the hierarchy of the school and the authority she had amongst teachers and students. By experimenting with different formats, she came to the realisation that the emphasis on authority and discipline-based areas of study in the school necessitated a particular approach to integration. She also did not embrace a pure integrated code as described by Bernstein preferring to retain greater control over the content. By developing a unit that was weakly framed in some respects but still maintained some areas of strong framing particularly in terms of the selection of the content, she was able to satisfy

her middle-school colleagues, senior-school teachers, the principal, parents and the students.

Middle-school teachers wanted their students to develop group skills, flexibility and organisational skills in keeping with the middle school philosophy. Senior-school teachers favoured a greater development of content to prepare students for the external examinations. This was achieved in the integrated Forensic Science Unit by taking some control over the content, using self-contained sections relevant to discipline-based areas of work and limiting the duration of the unit to two weeks. The principal was keen for the school to be seen as innovative and creative and this unit assisted in promoting this image. Parents were happy because their children were enthusiastic and keen about the unit and it allowed their children to see greater relevance to their own life, improve organisational and collaborative skills and to further develop content knowledge without taking too much time from the curriculum. Students were happy because the unit was different, gave them a greater degree of responsibility in their learning and was fun. Ms Manor had come to realise a compromise situation, which she had developed through her own deep knowledge and appreciation of the school culture.

The following quotes from Ms Manor illustrate that she had a strong realisation of the curriculum culture of the school:

95: Ms Manor: When I'm doing introduction, I talk to them (the students) about the fact that you know this is an integrated unit, and what this means and how I want them to think about how all these things tie together, and that they all come together in a pool.

119: Ms Manor: What it's (the integrated unit) about is taking what they've done already and applying it in a different way to consolidate what they've learnt.

127: Ms Manor: I think that what happens in science and probably in a lot of other subjects as well, is that you tend to get caught up on filling the students' heads with knowledge rather than getting them to discuss issues.

171: Ms Manor: I'm sort of fairly aware of the fact that you need to have one person, one captain steering the ship (laugh) so I got the story organised and I put everything

together, like I did that the other day, linked all the documents together and helped get the girls sorted and organised. So I have a tendency to take a fairly pro-active role in the unit, but that's by virtue of the fact that I'm, as I said I'm the team leader, and I'm conscience of the fact that I don't want to put too much pressure on everyone else, and you know it's much easier to control the outcomes and the direction if you do it yourself, but if you're standing over someone and, 'I need you to do this and I need you to do this and I need you to do this', I mean it's not like I'm sort of authoritarian and I can tell them what to do, but we can discuss... (Interview with Ms Manor, 12-10-01)

### **Above Our Heads**

The Above Our Heads unit was more typical of the style of units in the middle school. I am familiar with the structure of other units, particularly in mathematics and science and to a lesser extent in social science. My two older daughters have also both gone through the middle school and I am familiar with the work they have brought home over the years. The Above Our Heads unit was conducted at the end of the year and there was a rushed feeling about the classes. As it was, the teacher left out one section completely as the class ran out of time.

The unit consisted of some specific content obtained from files students downloaded onto their laptops and questions about the readings in the student booklets. These booklets were to be kept in the classroom although this was not strictly controlled. In addition, there were a number of experiments where the students had to supply the variable they wanted to test and then write up experiments in a particular format. The teacher maintained control over the pacing of the unit keeping all students together as they progressed through the booklet. Ms Manor spoke about pacing of the unit in the following way:

203: Ms Manor: How much freedom do they have to work at their own pace? Well I think "their own" pace always amuses me as a term. My concept of working at their own pace is that they are working on a specific task when they need to and there is fluidity within the classroom and that sort of thing. Other people always see working at their own pace as leaving it to the last minute and then rushing away. There will be no

scope for them to leave it to the last minute and then rush around, you spend your time with a whip, trying to get them sorted, and make sure that they all have it ready by period three-four on the 26th of October. (Interview with Ms Manor, 12-10-01)

Ms Manor gave explanations, conducted marking sessions where the class went over the answers to questions, encouraged some limited reflection relating to the design of some of the experiments, answered individual questions and collected the students' work at the end of the unit.

There was no formal assessment for the unit and the students were not given a grading for the work as the school was using outcomes based assessment across the middle school at this time. The students were given the outcomes that the unit covered (Appendix O) but the teacher did not draw attention to these. There was no attempt to indicate to the student what outcomes they had achieved or where they were having difficulty.

The realisation of this unit reflected Ms Manor's understanding was that she had to provide a significant amount of structure and push the students to complete the work in the limited time available. Her understanding of the value of content reflected in the most recent version of the integrated unit and the "the increased content contribution of the subjects" (Interview with Ms Manor, 7-12-01 (144)) was also realised in the unit *Above Our Heads*.

Ms Manor believed that it was important not to be too rigid in her program because she needed "to take into account (students') different learning styles" (Interview with Ms Manor, 7-12-01 (204)). This was realised in the students' flexibility to work with whomever they chose and to change groupings during experiments. One experiment, in particular, required the students to follow up on their own variable to investigate rate of descent of parachutes. Students appeared to be quite interested in this experiment but some failed to control the other variables (Field Notes dated Monday 19-11-01, Periods 5 & 6). The teacher spoke about the importance of controlling variables to the whole class at the beginning of the experiment (Field Notes dated Thursday 15-11-01, Period 2) but it was obvious that some students had either not understood or had not paid attention. Two of these students had performed exceptionally well in the integrated unit.

The teacher recognised that students needed help with writing (Interview with Ms Manor, 7-12-01 (322)) but did not spend much time assisting students with their write-ups. Instead she attributed students' limited writing about their experiments to a lack of space in their booklets (Field Notes dated Friday 30-11-01 Periods 3 & 4). She commented on the need for students to be able to develop this responsibility for their learning and to develop their reflective and reviewing skills.

The way the unit was conducted revealed the teacher's realisation rules. Ms Manor did not think of integration in the same way as Bernstein in his integrated code but as a capping stone opportunity to enable students to put into practise what they learned in the discipline-based areas of study. She also saw the integrated unit as an opportunity to enhance student motivation and enjoyment and to relate the work to real life problems. In the discipline-based unit she incorporated some of these aspects. However, due to time restrictions she pushed through the work to ensure that the content was covered.

### ***Students***

The principal, teachers and the espoused middle school philosophy supported the idea of students taking responsibility for their own learning. It was seen as desirable for students to develop social skills, team skills and self-confidence. The development of critical thinking and group collaboration was seen as being more important for a well-rounded education. The realisation of these traits was actuated in a number of different ways by the principal and teachers and has been discussed in the previous sections. The students' realisation of these philosophies is discussed here in relation to the two units.

### **The Integrated Forensic Science Unit**

In this unit the students worked more diligently and were more motivated than in the discipline-based unit. Parents reported hearing a lot about the unit from their daughters and commented that the girls had been very excited about the work. They had noticed their daughters doing homework diligently and enthusiastically (Parent Interview with Mrs Stone, 27-11-01 (164 & 176)). None of the parents could tell me anything about the discipline-based unit. All commented that two weeks was long enough for the integrated unit because the girls might lose interest and fall behind other students if it went on for too long.

One of the teachers commented that the girls did not appear to work for marks (Interview with Ms Corr, 26-11-01 (447)) but the girls were under the impression that they would be graded for the integrated unit and were determined to do well. These students picked up on the fact that they would get “bonus marks” in the integrated mapping exercise if they completed additional questions and so finished all of this activity to a high standard (see Appendix M). The teacher in charge was surprised at how competitive some of the girls were in terms of their marks. The girls who did not bother with the bonus marks, indicated in the mapping activity, were probably demonstrating realisation of the lack of consistency in the assessment procedures. The teacher did not follow up on this part of the assessment, as students were not given a grade for the unit.

The majority of students interviewed, said that they worked for good grades because they wanted to please their parents. Without the incentive of tests and reports, many of these students would not bother to try so hard (Student Interviews with Andrea Vince, 22-11-01 (182-187), Claire Beck, 19-11-01 (247-250), Emelia Stammer, 20-11-01 (208-218 & 239-250) and Jane, 20-11-01 (207-210)). Students for whom schooling was perceived as being of importance to their adult life acknowledged that they worked for tests but disagreed that the threat of a test caused them to work harder than normal (Student Interview with Annie Rush, 19-11-01 (67 & 180-185)). Students recognised that to complete the work in the integrated unit they needed to cooperate and be responsible. They felt responsible to their peers to complete their share of the work. Some students also assumed leadership roles of their own accord. The end result was that the work was completed and the trial was successfully conducted with maximum participation. The comments of one teacher sums up the experience:

216: Ms Felix: I think they learnt a lot about working as a group, as a team. To enjoy it at the end they had to cooperate, be prepared for when they were being called, the people who were not as disciplined with themselves were punished by their peers, I really think there was a lot to be learnt not just about the theory of forensics. I think working as a team, getting something that they got a lot of pleasure out of when they actually did it as if it was really serious and I was taping it so it was very important that they knew what they were doing then otherwise it would ruin the tape. I didn't want to

stop and start. I thought it was very interesting to see the girls who like disrupting or being the centre of attention did not work, they had to cooperate with their friend and it meant some had to rise to the occasion whereas at other times they wouldn't have.

(Interview with Ms Felix, 26-11-01)

After the trial the girls on the jury had to leave the room and come to a verdict. These girls had not been involved in the writing of the trial or the collecting of the evidence so were in a better position to judge the trial on the strength of the arguments posed. They were taking a long time to return to the classroom so I went outside to find out what they had discovered from the trial. I found two girls insisting that the defendant was innocent and the others arguing that he was guilty. They were in a deadlock, each group trying to persuade the other of the defendant's guilt or innocence (See Appendix S, section 818-873 for description of jury discussion upon which this section of the analysis is based). After a heated discussion one of the girls admitted that she thought that the evidence showed that he had tried to trick Aunt Mimi into signing the contract and was therefore guilty of fraud. This girl was a close friend of the student who maintained the defendant's innocence and had initially chosen to support her friend even though she was more convinced of the majority opinion. Eventually she changed her mind because her realisation of the rules of friendship, were overridden by her realisation of the rules of the democratic process and classroom behaviour. This still did not solve the problem, so at that point one of the girls suggested that they say to the teacher that the decision was unanimous even though it was not so that they could move on. The opposing girl had no objections and the jury returned to the court to announce a unanimous verdict. The eight girls all recognised the need to break the deadlock and precede but also understood that there would be no changing this girl's mind. They came to a compromise position that suited everyone in order to expedite the process, something that their teacher often did by assuming her authority. This incident showed that the girls recognised the teacher's pragmatic behaviour and realised it for themselves.

For the teachers, the main focus of the assessment was the successful conduct of the trial and this was judged on an informal basis taking into consideration individual student's contributions over the previous two weeks and their involvement in the trial. At the end of the unit the teachers informally presented selected girls with

certificates for their involvement based largely on group collaborative skills, initiative in finding ways to obtain information and in their involvement in the trial. No record of the certificates was kept by the teacher, which explains some of the teacher's recognition and realisation (i.e., it is not always necessary to have formal, documented assessment). Emelia Stammer was given a certificate because of her determination to concentrate and do the work to the best of her ability. Jane received a certificate for her initiative shown in getting information about bus and ferry routes and times and in completing the mapping exercises. She picked up on the bonus marks in the mapping exercises and as a consequence was concerned about the assessment procedure. She had also been a significant contributor to the writing of her part of the evidence in the trial but no mention was made of this. Anna, the girl responsible for writing most of the script for the trial, was given a certificate for her role in the scriptwriting, as was Lara, who managed to keep the group of four writers cooperating and focused. Katie, who was absent at the dress rehearsal, was given a certificate for her dramatic representation of Aunt Mimi in the trial, as she had to improvise and answer questions on the spur of the moment with no script. Mandy was given a certificate for her determination to crack the code because she had gradually taken greater risks in her efforts and had learnt confidence and perseverance. The teachers generally gave certificates to the girls who were most visible during the trial. There were many other girls who worked quietly and diligently who did not receive certificates. Emelia Stammer's mother commented to me how thrilled her daughter was at receiving a certificate. Annie Rush worked extremely well for the two weeks, was responsible for writing her own answers for the trial and was very good in her role of a witness in the trial but did not receive a certificate, much to her disappointment.

Most girls recognised the behavioural rules of the classroom and could in turn realise them quite well, knowing how to turn situations around, expedite matters and initiate and maintain group collaborative skills and social organisation. There were considerable differences in students' ability to realise the spoken and written language of the Integrated Forensic Science Unit and the Above Our Heads Unit addressed later in the section entitled *The Language of the Classroom*.

## **Above Our Heads**

In this unit the students were under pressure from the teacher to keep moving along together. The unit was rigorously controlled and there was little scope for individual choice except in one experiment where students could choose their own variable to investigate. Students also had some freedom about whom they worked with and where they sat. Ms Manor felt that the students were unable to take initiative and that there were no real leaders in the group. Some girls were quite motivated whilst others gave the impression of not working but actually worked very hard. Other students in the group managed to complete the work to an acceptable standard. They did not feel the need to put in extra effort without a pay off.

During this unit I also briefly visited two of the other three classes studying Above Our Heads (Field Notes dated Thursday 15-11-01 Period 3, Blue Group and Period 5, Yellow Group). Whilst I only had time for casual observation, the Blue Group appeared a little more cooperative but didn't seem to progress any faster than the group I was observing. The Yellow Group, however, interacted with their teacher on quite a different level of understanding and appeared much more involved in trying to understand what was really happening with the concepts being taught. They appeared to understand and to be able to apply the concepts that the teacher liked to use.

In general, students were observed to be less industrious in the discipline-based unit than during the integrated unit. Students were observed to be off task more often but managed to finish the work expected of them in the required time. One student commented to me that she didn't like this unit as much because she felt more on her own. She could get more help from her peers in the integrated unit (Student Interview with Debbie Stone, 23-11-01 (216)).

Anna, the Crown Prosecutor in the integrated unit was observed to be far less motivated in this unit compared with the integrated unit. She would arrive late to class, wander around to find out from others what she was supposed to do and chatted socially. She still managed to do some work and performed the experiments thanks to the girls she was working with (Field Notes dated Tuesday 27-11-01, Periods 5 & 6). She appeared to understand the differences between the two units and realised this by getting away with what she could.

As this type of unit is more common than the integrated format at this school it is possible that the girls were more familiar with what they could get away with and still achieve a reasonable outcome. In the integrated unit a lot more of the responsibility for the joint outcome was placed on individual students.

### ***The Language of the Classroom***

After the last lesson for the year I mentioned to the teacher about the way that the girls were doing their experimental write-ups (Field Notes dated Friday 30-11-01, Periods 3 & 4). We looked at the booklets they had used in science and she showed me how in the beginning the experiments were comprehensively written for them. Gradually less and less information was provided until students had to write their own reports in full detail. In lessons she talked about hypotheses and discussed the meaning of controlled and manipulated variables. However, most girls were unable to write a complete report on their own. Ms Manor commented that she had not noticed such difficulties when teaching similar concepts to Year 8s and so concluded that it was a maturation problem. She had also admitted that this particular class of Year 7s were not motivated to elaborate on things and yet they appeared to understand quite well. She said that another of her Year 7 classes did elaborate when writing conclusions and also answered questions that they had been told to leave out. I looked at some of these explanations and they were all well written. The teacher was at a loss to explain this difference in behaviour on the part of the class that I had been observing. I have therefore included here a section looking at some of the spoken and written work of three of the students observed.

I will consider data from some of the lesson dialogue, the interviews (see Appendices S, T and U) as well as the students' written work (see Appendices J, K, N, L and P) to indicate the different levels of realisation these students possessed.

### **Claire Beck**

Claire Beck was one of the girls I described in Chapters Six and Seven. I have field notes written about her, I have separate interview data with her and her mother, recorded conversations between her and her fellow students and recordings of team meetings where teachers spoke directly about her. This information was incorporated into the narrative of *The Trial*, which can be found in Appendix S and was used extensively in Chapter Six. I also have a copy of her portfolio of samples of her work

in second semester, which was intended to accompany her official end of year report, for her parents' information and her Self-Reflection sheet (Appendix J).

Of all of the girls interviewed, Claire appeared to have the greatest problems fitting in socially and intellectually. All of the information I had gathered about her gave me the impression that, in her mind, she was working in an appropriate manner, and trying to do what was asked of her. Speaking with her mother confirmed this opinion. Claire believed that she was capable of being responsible for her own learning and that she was, in fact, doing this. She, like several other girls, acknowledged that she worked best in subjects she was good at or had a natural ability for. In her case, this was English and Drama and her confidence in her ability to act her role as Defence Councillor allowed her to render a most convincing closing argument in the integrated unit. On the surface, one would be tempted to conclude that she understood every word she uttered, and perhaps she did. Her interactions with the teacher and other script writers indicated that something was happening that prevented her from being able to realise the written language needed to write her line of questioning for the script. I was surprised, because of this, when she told me she was good at English and some of her work samples with comments from her English teacher confirmed this. None of the work samples, however, contained any extended answers, just short responses or fill in the gaps and she had not demonstrated the ability to process information in any complex way. The most she had been required to do was sort information in a chronological sequence.

At the beginning of the integrated unit, after the roles had been decided and the scriptwriters commenced working on the script, I observed Claire trying to obtain her questions from the teacher and other students (see Chapter Six, "Claire Beck" and Appendix S and U). She was present when the teacher had a long discussion with the scriptwriters about how the script should be written but she was observed to be concentrating solely on her role and not listening carefully to the teacher's explanations. She had a single-minded focus about her role and her importance and appeared not to understand that all of the roles and hence the type of questioning was interrelated. The teacher had not explained the interrelationship of the questioning of the defence attorney and the Crown Prosecutor to her. She produced several questions of her own but these could not be used in the trial as the Crown Prosecutor needed to ask some of these questions before her, such as, "State your name". The

teacher only glanced at these questions and did not explain to Claire why they could not be used.

As the teacher tried to explain the interrelationship, it appeared that Anna and Lara were following the teacher carefully. Claire was gradually becoming more and more frustrated because all of the discussion had revolved around the Crown Prosecutor's questioning and in Claire's eyes it had no relevance to her. The teacher appeared not to be aware of this problem and did not try to explain to Claire the importance of linking the questions. I can understand Claire's impatience as it must have appeared to her that she was being ignored, something that the teacher did not appear to recognise. From the teacher's perspective, she appeared to believe that Claire just did not understand how to write her questions, which was probably true. The teacher addressed this problem by dictating questions to Claire and without trying to explain the interrelatedness. Claire did not understand the group process required to write the script of the trial. This prevented her from realising the correct format for writing the questions. She did recognise the rules for the dramatic presentation, however, and given her confidence in her dramatic ability, she was able to realise this aspect extremely well. It also took very little effort on her behalf to be successful in this aspect of her role. In an earlier interview, the teacher commented that when introducing the unit she would speak about how all things were related but she never did speak of it (Interview with Ms Manor, 12-10-01 (95)). Nor did Ms Manor explain to the class that the process they would be following would be different from an actual trial and required collaboration between the defence and the prosecution (which would not happen in reality) in order to write the script.

Listening to the teacher I felt that a lot of her language contained many implications, which most students appeared to follow. Claire possibly could not follow these implications and therefore had problems recognising the relevance of the explanations. She also appeared not to understand how to work in a group situation. Other girls also had difficulty, but their roles in the integrated unit were not so dependent on the cooperation of three other girls. Writing the script required not only the ability to be independent and able to take on responsibility for segments of the work but it also required the four students to be able to discuss the unfolding of the trial in a logical way exploring the interrelationships of the lines of questioning to be able to present substantial evidence. Obviously in a real trial this collaboration would

not occur but the girls did not have sufficient experience to be able to carry off the trial without the collaboration. The teacher did not realise the need to explain to the girls how they should be working together and Claire appeared to have little understanding of what was required of her. Anna and Lara seemed to understand and worked collaboratively on the script but neither of them was able to explain to Claire what was required or why. Anna did try to help Claire understand how to write her questioning but it ended up with Claire writing everything down (see Appendix S (106-119) and Appendix U).

Claire Beck felt that her role in the integrated unit was very important and that she had been a significant contributor (Student Interview with Claire Beck, 19-11-01 (208)). The teacher had written most of her questions for her and Claire found it very difficult working with the other students because she could not understand the relationship of the line of questioning throughout the script or the process required. The girl who acted as the Crown Prosecutor tried to help Claire on several occasions but used very similar patterns of speech to the teacher and left out parts of speech that were implied. I doubt that Claire understood (see Appendix S (106-119)). Claire learnt that the best strategy for her was to get the others to think of the questions she needed to ask and write them down. In this way she realised the need to meet the expectations of the teacher's without fully recognising and realising the process.

On reflection, Claire behaved quite similarly in the unit Above Our Heads although the difficulties she was experiencing were not so obvious. She was observed paying very little attention when the teacher was explaining concepts or the instructions for doing the next stage of the work. She and a friend were off task a lot of the time and were rarely picked up by the teacher. When it came to doing the experiments in this unit she would often commence the work without having understood the instructions. She managed to work out what she needed to do by questioning her peers who were most cooperative in explaining things to her (Field Notes dated 14<sup>th</sup> November 2001 Periods 3 & 4, page 3). Claire admitted in her interview (Student Interview with Claire Beck, 19-11-01 (122-131)) that she did not understand the teacher's explanations and found it much easier to ask her classmates.

At one time, during a whole class question/answer session, the teacher asked Claire a direct question. Claire sat and smiled and after an awkward pause another girl answered for her. The teacher continued as though nothing had happened (Field

Notes dated 14<sup>th</sup> November 2001 Periods 3 & 4, page 7). I am sure that Claire had discovered what she needed to do in class to satisfy her friends and the teacher. She recognised that other students would help her out if she could not answer the teacher or had not paid attention to instructions. She was not concerned because the teacher seemed to accept her behaviour. In the integrated unit she was in a more vulnerable position, but in the discipline-based unit she had learned to operate in an efficient manner that suited her purposes.

In an interview Ms Manor acknowledged the pattern of Claire's behaviour. She said that there were several girls who behaved in a similar manner because, "they have learned that they don't need to do the work themselves because if they wait long enough it will be put up on the board for them to copy down and they are bright enough to get away with it." (Field Notes dated 14<sup>th</sup> November 2001 Periods 3 & 4, page 6). The implication here is that the teacher felt that they were lazy and using the structure of the classroom to get away with doing minimal work. I feel that this is possibly only part of the story.

Claire appeared to be much happier in the Above Our Heads unit than in the integrated unit and enjoyed muddling her way through the work without paying close attention. In her Self Reflection (see Appendix J) of the integrated unit she admitted to not enjoying the unit and mentioned in her interview that she had learned "nothing" and that it was "a waste of time" (Student Interview with Claire Beck, 19-11-01 (174-177)).

Claire managed to fit in work on her portfolio during the final lessons of the unit, Above Our Heads. When it came to the last lesson for the unit, she had still not completed her booklet. The teacher asked the students to complete their booklets and hand them in before beginning a PowerPoint presentation about the solar system, something she had asked them to do at the last minute because some girls had finished everything. Claire obviously liked the idea of a PowerPoint presentation and began working on this without finishing her booklet. After a time, the teacher realised that Claire had not finished her booklet. Ms Manor asked Claire to open her booklet but she chose to do nothing more in it and did not hand it in for marking (Field Notes dated Friday 30-11-01 Periods 3 & 4, page 1).

When questioned about the units or the content of her science she would give brief answers, usually, “don’t know” or “yeah” or “nope” but when questioned about something on which she had an opinion she proved to be quite articulate.

Unfortunately this happened too rarely. She appreciated the social opportunities that school provided and could see the importance of these opportunities (see Appendix T & J).

Claire’s behaviour was symptomatic of the recognition rules she possessed and the process by which they were realised. It is difficult to know if she was being lazy, something her teacher hinted at, or whether she recognised the language of the classroom extremely well but in a way that was not intended by the teacher. This mis-recognition could lead to difficulties with realisation and might explain her problems with writing questions in the integrated unit and completing experimental write ups with comprehensive conclusions.

### **Anna**

I do not have interview data with Anna but I do have observations, transcriptions of recorded conversations, her Self-Reflection sheet (Appendix K) and the questions she wrote for the integrated unit (Appendix N). In comparison to Claire Beck’s her Self-Reflection sheet was comprehensively answered and she obviously read the questions carefully and completed them thoroughly. Anna was typically a “good” student. She did, however, have a reputation for being forgetful when it came to handing in notices, something her form teacher had commented to me about when I mentioned that I was still waiting on her to return her interview permission slip, which she never did return, hence the lack of interview data.

As the Crown Prosecutor in the integrated unit she was the key person involved in the script writing. Lara was very helpful and knowledgeable but Debbie Stone and Claire Beck seemed to struggle. Anna tried to help Claire to write questions for the trial but had not been able to communicate the way in which it needed to be done to Claire’s satisfaction (see Appendices S (106-119) and U). I overheard Anna comment in class that she had been discussing the integrated unit with her father and it appeared that this discussion had helped her to sort out better in her mind what it was she needed to do.

Anna's questions (see Appendix N) followed a logical sequence that would be found in a court case. She began by asking the person taking the stand to state their name and then developed her questioning gradually building to evidence that could convict the defendant. Her line of questioning reflected a very strong ability and hence realisation rules to write and verbalise in a manner appropriate for a court case and the use of forensic evidence. In her Self-Reflection sheets (see Appendix K) she admitted that she found it difficult to write the questions and that it was hard work but she had stuck at it and had done a very good job.

Anna demonstrated excellent recognition rules and realisation rules in that, not only was she able to carry out her role exceptionally well and write questions that demonstrated an understanding of the role of forensic evidence in a court case but she was also able to help other students who were having difficulties. In the Above Our Heads unit this ability was not as noticeable and she blended in with the other students, coming late to class, not paying attention and relying on others to give her information she needed for completing her own work. She did not hand in her completed booklet and unfortunately I have no information about how well she wrote her experimental write-ups for this unit.

### **Annie Rush**

Annie Rush was a motivated and conscientious student who was responsible for her own learning. While academically able she was challenged with the learning disability of being mildly dyslexic. I have observations, interview data, her record book of notes for science, her Self-Reflection sheet (see Appendix L), her portfolio, her test results for the science based unit on forensic science and a report she wrote of her experiment about parachutes studied in the unit Above Our Heads (see Appendix P) and an interview with her mother. She, like many others, did not hand in her booklet for the discipline-based unit as she had lost it but she did hand in an exercise book into which she had written many notes.

She first came to my attention during the integrated unit when she was asked by the teacher to be one of the expert witnesses in the trial. She tried to get other roles but had missed out on getting sufficient votes, losing the role of Defence Attorney to Claire Beck. The teacher offered Annie the role of an expert witness.

Annie developed her character profile of the hair fibre and DNA expert as an energetic, young and attractive female. Jane, the other expert, reminded Annie in class of the fact that the character profiles were supposed to be stereotypes. Annie said that she would not be a stereotype (see Appendix S (274-292)). There were a few occasions where Annie rebelled against the restrictions of the classroom and this was one such occasion where her recognition of the situation and her ability to realise it in an appropriate way allowed her to do something different.

As an expert witness she contributed to the writing of the script by composing her own responses to the questions asked by the Crown Prosecutor and the Defence Attorney. She thought carefully about her responses, taking great pains to make sure that her expert's age and experience were realistic. This she thought of herself and at the time asked me questions, such as, "How long does it take before you become an expert at something?" (see Appendix S (294-313)). Her answers to the questions were well done but were all short sentences and did not require the thought necessary to construct the actual questions. She was making use of strategies her mother had given her to keep her sentences relevant and lucid and showed good realisation of these techniques. Her difficulty with writing responses could therefore not be detected in this context (see Appendix S (313-367)). Her rendition of an attractive, young, female expert during the trial was most convincing.

In the discipline-based unit she was not as noticeable as she had been in the integrated unit where her keenness to do her job and her gregariousness brought her to my attention. In this unit she continued to work well and to complete all activities required. During one of the very first experiments (Field Notes dated Tuesday, 6-11-01 Periods 3 & 4), I was impressed with the way in which she demonstrated air pressure. No one else at the time seemed to be successful with the experiment so I went over to her to find out if she understood what was happening. She was most eloquent with her explanation and obviously understood very well, whereas her partner in this experiment, who happened to be Claire Beck, did not understand and continued to insist that air was nothing.

One other time, in Annie Rush's interview, I asked her what chromatography was, to check her recall of concepts learned in science and she answered in detail, aware of all of the steps and was the only person able to answer in such a detailed and accurate way (Student Interview with Annie Rush, 19-11-01 (135)). I was puzzled that she

only got 25/30 for her forensic science test, one of the lowest marks, and so obtained a copy of the test. She was proud of her good mark but I thought she was capable of full marks. Her answers were short and accurate but as she proceeded through the test it became apparent that she began to make mistakes in comprehension and was unable to adequately explain her answers. Questions that did not require elaboration and a good usage of the English language were all correct. I felt frustrated for her because I knew that in this case she could do the work but was not able to realise the marks she should be getting because she could not cope well in the written format.

In the lesson (see Appendix P) where Annie Rush performed an experiment on the rate of descent of a parachute she asked the teacher if the group should be testing for the fastest or the slowest parachute. Ms Manor turned the question back onto Annie and asked her what she thought. Annie suggested the slowest and steadiest parachute and the teacher agreed. Annie's write up for this experiment can be found in Appendix P and her conclusion, although elaborated on and basically "correct" has the odd spelling and grammatical errors. This conclusion did not match with the graph or the table of data, and the teacher made no comment. Annie did not discover the mistake herself. This type of mistake seemed to be common for this class and girls understood their error when it was pointed out to them but could not be bothered to go back and fix up something they thought they had completed. The integrated unit appeared to provide the student with greater motivation to get the work done correctly than the discipline-based unit.

Annie demonstrated the recognition rules and realisation rules that her mother had given her to allow her to cope in a classroom situation. The laptop was a valuable tool for her as she was able to re-edit work as often as needed. Her difficulty in realising the written language of the classroom proved a stumbling block but she compensated with other coping mechanisms.

## **Conclusion**

The objective of this chapter was to examine the two units observed in terms of Bernstein's framework.

Table 1 collates the information about framing from this chapter and classification from chapter five.

This chapter began with a look at framing issues, which Bernstein labelled the regulative discourse. I examined this discourse for the school and its principal, parents, teachers and students by collating descriptive words about the school, the principal, the teachers and the students. This discourse provided some of the cultural background of the individuals influencing the school and a better idea of how the classification issues would influence decisions made in the school by the principal, parents and teachers and how students would react (see Table 1) to this.

Table 1 Classification and framing values that impact on the grammar of the school and the instructional discourse

	<b>Classification</b>	<b>Framing of the Regulative Discourse</b>
<b>Principal's Views</b>	$C^{--}$ to $C^{++}$	$F^{++}$
<b>Parents' Views</b>	$C^{--}$ to $C^{+}$	$F^{+}$
<b>Teachers and Teaching Team Relationships</b>	$C^{-}$	$F^{-}$
<b>Students</b>	–	$F^{-}$
<b>Teacher/Student Relations</b>	$C^{+}$	–
<b>Timetabling</b>	$C^{+}$	–
<b>Spatial Arrangement</b>	$C^{+}$	–
<b>Curriculum Constraints</b>	$C^{+}$	–

The instructional discourse was then examined, looking at the categories of the selection of the communication, the sequencing of the work, the pacing of the work for the individual students and criteria of knowledge. Educational dialectics

suggested by Belenky, Clinchy, Goldberger and Tarule (1997) (see Appendix R) were used as referents for the criteria of knowledge category.

It became apparent that the Integrated Forensic Science Unit was much more weakly framed in terms of the instructional discourse than the discipline-based unit entitled Above Our Heads (Table 2).

Table 2 Framing values of the instructional discourse for the units

Instructional Discourse	Value of Framing	
	Integrated Forensic Science	Above Our Heads
Selection of Communication	F <sup>+</sup>	F <sup>++</sup>
Sequencing	F <sup>-</sup>	F <sup>++</sup>
Pacing	F <sup>--</sup>	F <sup>++</sup>
Criteria of Knowledge	F <sup>-</sup>	F <sup>+</sup>

Finally I examined the realisation rules belonging to the principal, parents, teachers and students.

The detailed use of Bernstein's framework has allowed a deeper understanding of the classroom situation for the two units observed. It has revealed that while students may possess realisation rules appropriate to the situation, sometimes those rules developed in a way that was unexpected. The study also highlighted the teacher's own recognition and realisation rules. These rules prevented her from being able to recognise certain inappropriate realisation rules developing in students.

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## Chapter Nine: Meanings and Interpretations

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... theory produced as part of qualitative data analysis is typically a statement or set of statements about relationships between variables or concepts that focus on meanings and interpretations. (Ezzy, 2002, p. 5)

### Introduction

This chapter is the culmination of four years of data collection and writing. Much has been revealed by the study, certainly a deeper understanding of integration and the use of Bernstein's framework. It is hoped that more has also been learned about the relationships between the culture of a school and curriculum practice. The study has highlighted the significance of school philosophy and the structure of the school with respect to power and control relationships. There was, however, a discrepancy between the espoused beliefs of the principal and the ways that he realised these beliefs. This meant that integration practice was more strongly classified and framed than school philosophies might suggest.

This final chapter comprises of five main sections. The first section examines the significance of the study and its position within the literature. Secondly I explain how the study has led to the modification of the mapping tool, which allows for a more comprehensive view of the relationship between school culture and curriculum practice. The third section, "Propositional Statements", presents my attempt to make meaning of the relationships observed. In the fourth section I discuss the implications of the study and finally present some ideas for further research.

## **Significance of the Study**

This study is significant at three levels. It has helped me to develop a better understanding of integration and its place within the culture of a school. It has also highlighted difficulties experienced by students and teachers and provided an insight as to the reasons for these difficulties that extend beyond the boundaries of the disciplines. The research provided the opportunity to apply Basil Bernstein's Pedagogic Code in a practical way. Importantly, it has provided me with the opportunity to develop an understanding of the qualitative research process; to make explicit my theoretical perspectives, and develop the necessary research skills.

In hindsight, I realise that the complexity of the Bernstein framework restricted the extent to which the teachers could interpret and utilise the findings. There were, however, many significant practical benefits for the study participants in terms of:

1. Additional time for teachers to spend with students due to the presence of the participant observer well informed about the content of the unit,
2. Opportunity for teachers to discuss their concerns regarding the integrated unit and to better understand how to take greater responsibility for the unit due to these discussions,
3. Involving the parents in their children's academic endeavours and giving them an indirect 'voice' to express their concerns and approval/disapproval to the teachers involved, and
4. Involving students so that they felt greater responsibility for their own education due to the reflective process initiated by the study.

My presence as a participant classroom observer provided another 'pair of hands' for the teacher and the students. Teachers were given the opportunity to reflect on the units in question and to discuss the relevance of these units. This reflective process enabled them to put their feelings into words and work through the issues. Parent interviews helped parents examine educational issues and may provide them with an anonymous voice in future curriculum development. An analysis of the school, in terms of Bernstein's Code, could be used by key stakeholders to assist in the future development of the middle school curriculum.

Since the study was conducted, the integrated unit was used in a similar way the following year with some minor adjustments. In the subsequent year it was replaced by a different unit, reflecting the interests and expertise of the new Year 7 team members. This current year Ms Manor is the Year 9 level coordinator and is not involved with the Year 7s. Next year she will once again be the Year 7 coordinator and it will be interesting to see what happens to the integrated unit.

At a middle school meeting earlier this year that I attended as a parent the curriculum structure was explained. It was pointed out that the school would provide limited experiences of curriculum integration to Years 7 and 8 but there would be a significant component in Year 9, together with what was called integrated studies. This move is probably not a direct consequence of the study and was underway before I entered the school as a researcher. However, indirectly, I believe the study has prompted reflections and discussions about integration contributing to this development. For the first time integration was formally acknowledged as a valuable part of the curriculum, particularly in the Year 9 curriculum and it was allocated a whole page in the booklet given to parents where it had not been incorporated in previous booklets (see Appendix V). The booklet outlined how integration fitted within the philosophies of the middle school that required the development of:

- Life skills
- Higher order thinking skills
- Determining the students own place in society, and
- Active learners who are capable of addressing the world with imagination, creativity and purpose.

In order to do this, it was explained that integration could not be thrust upon students in Year 7 but needed to be gradually developed so that Year 9 students had the skills required to cope with an integrated approach. In Years 7 and 8 it was planned for students to work around central cross-disciplinary themes. In Year 9 students were to experience an integrative curriculum where they were responsible for directing their own learning. (Notes taken at parent information afternoon, February 2004)

The third level of significance is to inform other researchers and teachers. Many commentators have offered suggestions about the structure of the middle school curriculum (Beane, 1991, 1996; Flemming, 1993; Roberts, 1998). Others note that,

“research examining integration in practice is still relatively rare” (Wallace et al., 2001, p. 9). This research goes part of the way in filling that gap. In this study Basil Bernstein’s Pedagogic Code has proved to be a useful tool in examining curriculum integration. This research may shed light on ways it can be more widely applied and suggest means by which the theory can be further developed.

In an effort to further distribute knowledge of this study to the greater research community, a paper, summarising the framework and findings of the study, was presented at the 2005 annual meeting of the American Educational Research Association in Montreal, Quebec (Chien & Wallace, 2005). The teachers who participated in the study were provided with a copy of the paper to further inform them of the research findings.

## **Reflections on and Modification of the Mapping Tool**

This section deals with my reflections on and subsequent modifications of the mapping tool. When trying to map the data for the instructional discourse onto the grid lines developed during the development of the framework (Figure 4, Chapter 2) I found that a simple two-dimensional representation of the values of classification and framing was too simplistic a representation of a complex phenomenon.

My data were not clearly divided among the two units. There were some data that reflected the overall grammar of the school and were therefore applicable to both units. These overlapping data referred to the classification values of the school culture categories. I found that such data could not be easily represented on the two-dimensional gridlines of the existing mapping tool. As a consequence I chose to use the classification axis to represent the overall classification of the grammar of the school, as these power relationships appeared to be common for each of the units. I averaged classification values across these categories to arrive at a single value ( $C^+$ ), reflecting the grammar of the school. Hence classification has been represented by a single axis in the modified mapping tool (see Figure 5), as it was in the original. However, the value of classification mapped is relevant to the overall culture of the school rather than individual categories of classification such as the principal. This allows comparison of the two units in relation to the overall school culture.

The framing axis was used to represent the values of framing only pertinent to the instructional discourse. These categories of framing could be applied to each of the

two units. This reflected the framing of the units within the larger context of the school culture. However, this flat, two-dimensional representation did not go far enough in terms of indicating the nature of the units observed as there was no provision for showing more than a single value of framing for the instructional discourse (Figure 3, Chapter 2). In my framework the instructional discourse had four distinct categories (Table 2, Chapter 8). Hence, a third axis was added to the mapping tool to account for multiple instances of framing values attributable to a number of different categories of the instructional discourse. This third axis has been called “No. of instances of framing”. The provision of the third axis allowed me to represent the units in terms of the framing of the instructional discourse within the school culture. No attempt was made to identify the individual categories of framing. The third axis added another dimension to the mapping tool, which allowed for a more complete pictorial representation of the units observed.

The resulting three-dimensional map (Figure 5, Chapter 9) represents the complexity of the framing issues for each of the units observed against the classification of the overall grammar of the school. This representation assists my final analysis by allowing visualisation of a complex, multifaceted set of phenomena.

Had the values of framing been averaged and a single value for framing recorded, for each of the units, the value for the integrated unit would have been close to  $F^-$  and for the discipline-based unit  $F^{++}$ . No common framing values would be shown and the interpretation of the results would not accurately reflect the units.

The resulting mapping tool could be used in other situations to provide pictorial representations of differently framed units of study within different cultural settings. It is important to remember that this tool provides a method of visualising qualitative data and is not intended to accurately map quantitative data. This pictorial representation of the qualitative data is an attempt to represent the blurring of the boundaries of the units.

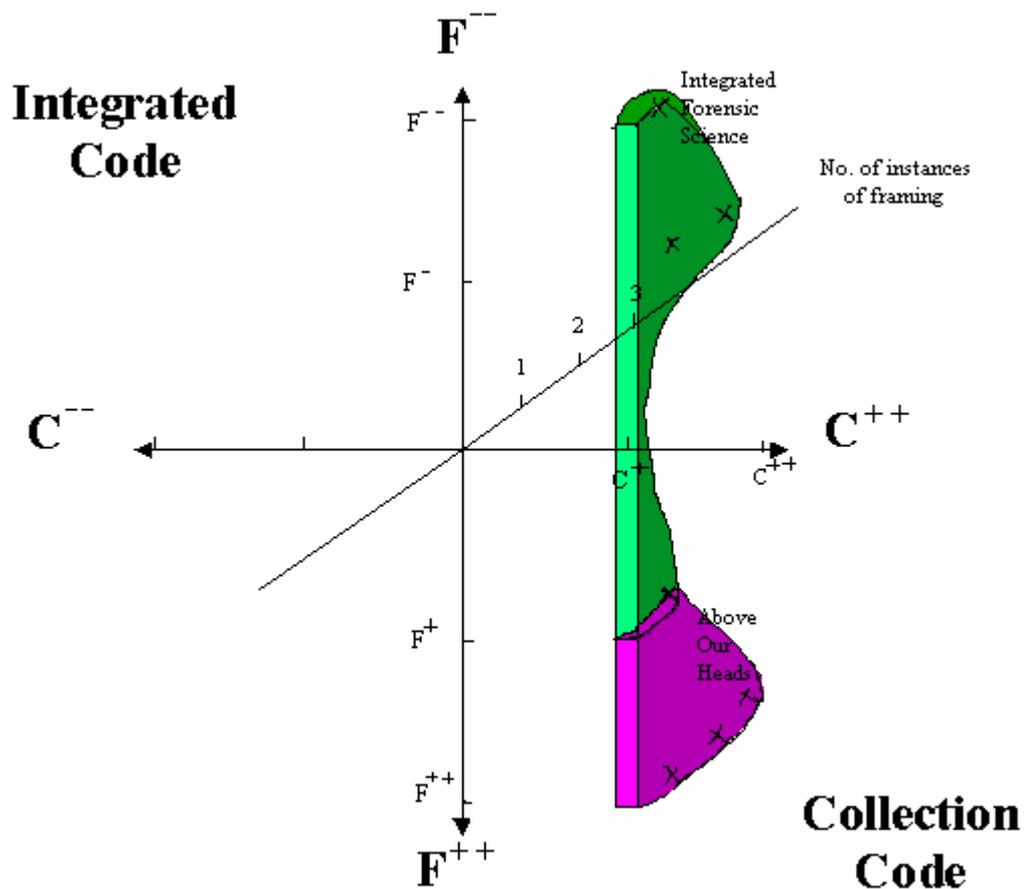


Figure 5. Map of the instructional discourse for the two units observed against the classification of the school

(Each cross (x) refers to an instance of framing, for example, the sequencing of the work in the Above Our Heads unit was located at the intersection of F<sup>++</sup>, C<sup>+</sup> and 1)

### Propositional Statements

The purpose of the research study was to come to a better understanding of the relationship between school culture and curriculum practices using the pedagogic code. In this section I present a set of statements or propositions intended to directly address the four research questions. The four research questions are:

- How are the recognition rules and realisation rules of the school used in framing the curriculum?
- How are the selected units constructed in terms of ‘classification’ and ‘framing’?

- How does the classification and framing of these units match the recognition and realisation rules of the school?
- What are the similarities and differences between the units and what are their places within the curriculum of the school?

The following propositional statements are generalisable only to the extent that they match the context and experience of the reader.

### ***Proposition One***

*The curriculum code in a school is strongly influenced by the congruence between the principal's espoused and realised values.*

In this study I observed that the principal retained strongly held values of framing of the regulative discourse (see Table 1, Chapter 8). The principal had strong control over the affairs of the school and in many matters his ideas predominated. The principal espoused a pluralism of views about education — his belief in the importance of the discipline-based subjects was held alongside his belief in a holistic, well-rounded education. For the principal, integration reflected the importance of many distinct areas of study rather than eliminating boundaries between subject areas all together. The  $F^{++}$  value of framing for the principal, if superimposed on Figure 5 could be interpreted as influencing teachers to choose instructional discourses that are reasonably strongly framed, thus remaining in line with the overall framing values of the principal. In a sense, I believe that the grammar of the school and framing of the principal pulled towards a collection code and away from an integrated code. This occurred in spite of the principal's spread of classification values ( $C^{--}$  -  $C^{++}$ ) and espoused belief in integration.

The similarities observed between this principal's espoused and realised values resulted in a strictly classified approach that allowed students access to a wide variety of discipline-based areas. On the other hand, this proposition would suggest that a principal with weak values of framing in the regulative discourse might lead to a style of integration that reflected weak to very weak values of classification and framing. Further, teachers implementing an integrated unit within such a school are likely to take into account the classification of the grammar of the school and the framing and realisation values of the principal and modify the unit accordingly.

### ***Proposition Two***

*Parent culture is an important determinant of curriculum practice.*

In this case study, parents had a strong influence on the school. Parents' perceptions of what constituted appropriate forms of education for their children became very important. They accepted the style of integration adopted by the school and provided their permission to proceed, within limitations. However, the overall conservativeness of the parent group meant that the teachers were reluctant to adopt integration more widely or in a more transdisciplinary manner.

Compared with the principal, the parents appeared to be less strongly framed in terms of the regulative discourse (Table 1, Chapter 8). If superimposed on Figure 5 this framing value would be situated at the intersection of the two units. In my opinion it is possible that this intermediary value of framing for the parents allowed for the social acceptance of both units within the home culture, thereby giving tacit permission for the teachers to reduce the values of framing for certain units. The parents' pluralism of opinions — hence the range of classification values ( $C^{--}$  -  $C^{+}$ ) — may have prevented the attainment of a pure collection code or a pure integrated code. Overall, parents held the view that the way they were taught was ultimately the way their children should be taught.

From this propositional statement it can be seen that schools do need to consider the parents' backgrounds and desires for their children's education when developing programs of instruction.

### ***Proposition Three***

*While teachers may espouse weak values of classification and framing they cling to their authority in the classroom because of the school's strong classification and framing values.*

All the teachers interviewed appeared to possess weaker values of framing ( $F^{-}$ ) of the regulative discourse than the principal ( $F^{++}$ ) or parents ( $F^{+}$ ). This placed them comfortably within the range of framing values for the integrated unit (see Figure 5). This leads me to propose that teachers found it easier to integrate units of study than the grammar of the school would suggest. Teachers' views and teaching team relationships (Table 1, Chapter 8) were also more weakly classified than the overall

grammar of the school. Again this may indicate that teachers were reasonably at ease with an integrated program. There was also a strong congruence between the framing and classification values of the middle school ( $F^-$  and  $C^-$ ) and its teachers. However, teachers appeared to be reluctant to relinquish their authority in the classroom. The stronger framing and classification markers of the senior school appear to have influenced the middle school teachers. They retained at least one aspect of stronger framing, seeing the middle school as a preparation for the senior school. Most teachers believed that an important purpose of secondary schooling was to provide students with the opportunity to proceed to further education, best achieved by obtaining good results in the Year 12 external examination. This belief eroded their strongly held opinions that the middle school was the ideal place to develop lifelong skills and forced them to be more conservative in their approach to their teaching.

#### ***Proposition Four***

*Some overlapping values in the framing of the instructional discourse for units of work are required for integrated units to gain respectability and acceptance.*

The principal and the parents held a spread of values for classification as the recognition rules identified for these categories indicated a dualism of views. Teachers appeared to be relatively weakly classified in terms of their recognition rules. The principal's, parents' and teachers' weaker values of classification (Table 1, Chapter 8) were not being acted out in the school culture and hence the form of integration possible within the middle school was realised within a relatively strongly classified and framed school culture.

Throughout the middle school a similar style of integration was employed. This style of integration was strongly classified. However integration is normally represented by weak classification. To create a strongly classified integrated unit certain categories of the instructional discourse needed to be weakly framed. A close examination of Figure 5 reveals that some framing values of the instructional discourse were at similar levels for each of the two units observed and other values showed very weak framing for the integrated unit and very strong framing for the discipline-based unit.

The map in Figure 5 shows that the two units are positioned separately with a small amount of overlap in their framing values. My contention is that the sharing of some common framing values allows the integrated unit to be different from and yet still cling to aspects of a collection code. This provides the integrated unit with some degree of respectability and acceptance within an overall strongly classified school culture.

### ***Proposition Five***

*School culture and curriculum practice are intricately connected.*

Bernstein's notions of a collection code and integrated code are closely connected to an understanding of the various classification and framing issues involved in school culture. Changing to a more integrated code can only be achieved by subtle changes towards weakening values of classification (de-classification) and/or, as shown in this study, by weakening the framing of the instructional discourse.

This study showed that although the teachers were keen to introduce integration within the middle school curriculum there were many restrictions on what could be done in the classroom. These restrictions revolved around the power relationships between individuals and subjects and resulted in modifications to the integrated unit to keep it in line with the established school culture. The decision to modify the unit to reflect the school culture was not a conscious decision and the integrated unit became less integrated, in terms of the power relationships of the discipline-based subjects, over the three years that I witnessed its implementation. This was accomplished by introducing blocks of discipline-based content that could be assigned to a subject area in an effort to show that all subjects were being accounted for within the integrated unit. The need to account for the subject areas was influenced by a senior school culture that encouraged teaching to the Year 12 external examination. Although skill development was cited as an important benefit of integration this appeared to take a back seat to the content of the discipline-based subject areas. The integrated unit was adapted to fit within the classification of the school culture. This was achieved by modifying the framing of the instructional discourse. Some of the values of framing were kept in common with the discipline-based unit to allow it to fit within the strongly classified and framed school culture.

This can be seen on Figure 5 where the two units meet at the intersection of C<sup>+</sup> and F<sup>+</sup>.

The integrated unit differed from the discipline-based unit in the way that the subject matter was handled in class. Students were given much greater control over the selection, sequencing and pacing of the work in the integrated unit. Because teachers weakened the framing of certain categories of the instructional discourse, for the integrated unit, some students became more confident. This increased confidence led to them becoming more visible to the teacher and other students therefore subtly altering the power relationships within the classroom and hence aspects of the classification of students and potentially the classification of the school culture.

Throughout the middle school, the classification of the subjects and framing of the instructional discourse for the discipline-based units served to influence the power relationships between teachers and students. Certain power relationships developed because of the predominance of discipline-based units in the curriculum hence contributing to the overall strong classification of the school culture. The integrated unit served to give students who might not normally be noticed the opportunity to bring themselves to the attention of the teacher and other students. This change in the power relationships among certain students due to the integrated unit could give rise to a gradual de-classification of the general school culture.

In this study the middle school curriculum has recently been modified to incorporate the development of integrated units. In Years 7 and 8 the units remain strongly classified and are integrated in terms of the framing of the instructional discourse. In Year 9 there is a greater weakening of the categories of framing, in particular pertaining to the criteria of the knowledge base. Given the situation where the classification of students and teachers is altered by the implementation of integrated units, it may be possible to witness a gradual de-classification of the school culture due to these integrated units. It follows that any de-classification of school culture would allow for the implementation of units that were more closely aligned to Bernstein's integrated code (weakly classified and framed). These observations reveal the intricacy of the connection between the curriculum and the school culture.

## **Implications**

The five main propositional statements pose implications for teacher education, school change and future research. By implications, I refer to those questions or issues that my research has exposed but may fall outside the boundaries of my study. These implications are discussed in this section.

### ***Implications for Teacher Education***

Using Bernstein's framework, it becomes apparent that the teachers' opinions about the criteria of knowledge and how they act as teachers is not simply determined by their short exposure to teacher preparation. Rather, their entire upbringing and experiences have subtly shaped their opinions about how students should be taught and what type of knowledge is valuable and should be taught in schools. Knowledge of Bernstein's ideas in relation to school culture and curriculum practice could be a useful tool to broaden student teachers' experiences and concept of schooling.

From my own contact with many student teachers and new teachers it appears that students who decide to become teachers enter teacher education courses with strong recognition and realisation values about schooling. Most were successful students who responded positively to the culture of schooling. These students, as teachers, appear to perpetuate the culture of schooling that was favourable to them, without thinking about the culture of the school they find themselves in or about the background of their students.

Personally, the use of Bernstein's framework opened up the door to the culture of the school and the classroom in ways that had not been expected. The complexity of the pedagogic code reflects the complexity of school culture and curriculum practices. In this study, the use of Bernstein's framework revealed a multitude of perspectives and opened windows to the lives of many different people. These insights brought understanding of the workings of the classroom in terms of the social background of students and teachers and provided possible reasons for certain curriculum practices.

The use of Bernstein's framework, in this study, in particular the ideas behind the development of recognition and realisation rules, has allowed me to establish some possible reasons why schools find it difficult to adopt curricula in line with new middle school philosophies. These reasons largely pertain to the culture pervading

middle and senior schools. The strictly classified vertical structure throughout this school did not allow for the secure realisation of integrative practices in the manner that may seem to be ideal. Therefore practice needed to be modified to allow for the acceptance of the integrative curriculum within the culture of the school. This was done subconsciously over time with much trial and error. In this school, it was been done successfully by maintaining similarities in the instructional discourse of the integrated unit and discipline-based units and by limiting the amount of time devoted to the practice of integration.

It is postulated that some knowledge of Bernstein's ideas, in terms of recognition and realisation rules and their impact on school culture and curriculum practices, could be useful teacher education tools. With improved recognition of the school culture teachers would be better able to decide the practicalities of various curriculum approaches. This would hopefully reduce stress and trauma when these teachers were encouraged to develop new approaches to teaching within a school culture.

Developing units of instruction that varied markedly from the classification and framing values that defined the school culture could be too demanding on the established culture. Teachers would find themselves in a stressful environment that was not conducive to the acceptance of new approaches to the curriculum.

Knowledge of the defining values of school culture through an understanding of Bernstein's framework could assist the development of new units.

### ***Implications for Change***

Many of Bernstein's ideas also relate to the area of school change. Fullan (1993) notes that teachers are poorly prepared during teacher education about how to "understand and influence the conditions around them" (p. 108). If knowledge of Bernstein's framework can assist in the development of curricula that fit within a school culture then it is reasonable to believe that such knowledge can help teachers understand changes to the culture of the institution. The curriculum is only one aspect of school culture. This study has revealed that the curriculum is dependant on many factors making up the school culture, in particular, the classification values of the principal and to a lesser extent of the teachers and parents. It may be possible, when armed with a sufficient understanding of Bernstein's ideas in relation to the

school culture to introduce change at the administrative and organisational levels of the institution in acceptable and sustainable ways.

An awareness of classification and framing values and the ways these values are recognised and realised within the school culture may assist in understanding the mechanisms of implementing change within the institution of the school. This knowledge could be used to implement change gradually and sustainably.

### ***Implications for Future Research***

There were many issues arising from this study that could be the subject of further investigation. For example, the apparent mismatch between the teacher's realisation rules and students' realisation rules could benefit from further investigation. Some students in this study covered up their weaknesses and therefore developed realisation rules that did not match with the rules that the teacher was hoping to develop in her students. These realisation rules form the basis of the structures of scientific communication and as such were necessary for the students continued success in the subject. One student in particular had great difficulty thinking about and writing experimental reports because she had developed coping strategies that the teacher was unaware of. In this case, the student was not able to gain academic support from her parents at home due to their own poor educational background. She developed a means of academic survival in the classroom, which went unrecognised by the teacher. A study of teachers' realisation rules and what the students learn as a result would be a worthwhile addition to this field of study.

A further use of Bernstein's framework would be to explore classroom interactions in terms of recognition and realisation rules for disadvantaged students, such as those students in this study with specific diagnosed learning difficulties. Bernstein's framework has already been used as a means of investigating disadvantaged students in terms of science classrooms in relation to social class, race, gender and pedagogic practices (Morais et al., 1992) and moderate intellectual disadvantages that necessitated students attending special schools (Daniels, 1987). Investigations of so called normal classrooms could help to clarify the difficulties experienced by students with learning difficulties when trying to learn the realisation rules expected for competent communication in a specific discipline area.

Other general observations revealed by the study could be used to further investigate the usefulness of integration. In this study integration was offered as a means of developing life skills, higher order thinking skills, determining the student's place in society and developing active learners with imagination, creativity and purpose. Using Bernstein's framework, a study focusing on the recognition and realisations rules developed in the student as a result of experiencing an integrated unit of study may provide support for these forms of teaching.

### **Coda: More Literature Utilising Bernstein's Ideas**

The Third International Basil Bernstein Symposium was held in July 2004, in Cambridge at the time of finalising this thesis. Abstracts of proposed presentations were available and many of these hint at the use of Bernstein's framework in ways similar to that conducted here. The abstracts show that Bernstein's framework has been used to address a number of areas relevant to teacher training and curriculum and school change. Here I present a summary of several abstracts pertinent to my own study. Stewart (2004), for example, uses Bernstein's principles of classification and framing to show how building designs can "modify behaviour and the effect to behaviour over time". In my thesis I mentioned how the physical structure of the school was one factor influencing integrated practice. Power and Whitty's (2004) findings that parents of academically able students influence their children's engagement with the school, matches my own research findings about the effect of parents on curriculum practice.

Other abstracts make reference to links between the use of the framework and implications for teacher education. Brown (2004), for example, reports on the use of Bernstein's framework in considering the "emerging forms of higher professional learning" and the implications of the changing relationship between professional practice and higher education. Singh (2004) suggests that the study of "curriculum, pedagogy and evaluation" is not enough to equip teachers to analyse "(1) the internal ordering of knowledge within these message systems, and (2) the potential differential positioning of students to this knowledge." I believe that some knowledge of Bernstein's pedagogy would benefit prospective teachers in determining the cultural environment they are working within and therefore assist them in getting the 'right' blend of curriculum, pedagogy and evaluation.

Naidoo (2004), whose study is also set in a private girls' school, compares an integrated with a traditional subject-based curriculum. As in my own study, integration was used to supplement the discipline-based curriculum by acting as a capping stone unit, to draw together knowledge taught in the discipline-based areas. Several of the abstracts indicate that Bernstein's pedagogic code has been used as a language of description similar to the methods used in my own setting. Morais (2004), for example, uses the concept of recognition and realisation rules to study teachers' learning during teacher training. Ivinson (2004) uses the descriptive capacity of Bernstein's pedagogic code to discover how the classroom operates by mapping recognition and realisation rules. Brier (2004) also uses Bernstein's code as a language of description and suggests that this framework could be used to provide insight for the development of the curriculum. Daniels (2004) describes an attempt to adapt Bernstein's framework and certain areas of activity theory to develop a model with which "the emergent objects of human activity [can be studied] through time". This implies the development of a framework to study the change process; something that my own study has alluded to.

## **The End of the Journey**

This final chapter has served to heighten my own realisation of the research process. I have examined the practicalities of using Bernstein's framework and developed my own mapping tool to allow better visualisation of the data and hence the possibility of developing theory based on these observations.

Although long and laborious, the research journey is a worthwhile experience as it broadens perspective and provides skills to analyse the world. A deeper understanding of oneself in the process is an added benefit as well as the gradual realisation of the meaning of theory and its appropriateness within the context of the research. The world of cultural research is a problematic world open to different opinions, perspectives and meanings and no observation can be easily dismissed.

I believe that the use of Bernstein's pedagogic code provides valuable insight to aspects of human endeavour. An understanding of his ideas, particularly in relation to recognition and realisation rules, could assist in heightening the awareness of teachers to potential difficulties in communication within the classroom and the wider community. His ideas extend well beyond the classroom and could provide

insight for businesses where a close working relationship between people is expected but often not encouraged in the most productive way. Further, a deepened knowledge of the power structures that are in play within the environment, in terms of classification and framing, may assist in developing appropriate strategies for change.

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# **APPENDICES**

## Appendix A:      Diary of Field Experience

### The Pilot Study

Date	Day	Time	Description
25-08-2000	Friday	11am – 1pm	Accompany class to Scitech for forensic science investigation
28-08-2000	Monday	8:30am – 3:30pm	Act as relief teacher for Ms Manor, taking science unit involving forensics
29-08-2000	Tuesday	8:30am – 3:30pm	Relief teaching for Ms Manor, taking science unit involving forensics
30-08-2000	Wednesday	8:30am – 3:30pm	Relief teaching for Ms Manor, taking science unit involving forensics
31-08-2000	Thursday	8:30am – 3:30pm	Relief teaching for Ms Manor, taking science unit involving forensics
1-09-2000	Friday	8:30am – 3:30pm	Relief teaching for Ms Manor, taking science unit involving forensics
7-09-2000	Thursday	11:15am – 1:00pm	Observing Integrated Forensic Science Unit (Commencement)
8-09-2000	Friday	12:05pm – 3:30pm	Observing Integrated Forensic Science Unit
11-09-2000	Monday	2:35pm - 3:30pm	Observing Integrated Forensic Science Unit
13-09-2000	Wednesday	10:00am – 2:35pm	Observing Integrated Forensic Science Unit
14-09-2000	Thursday	1:45pm – 3:30pm	Observing Integrated Forensic Science Unit
15-09-2000	Friday	9:10am – 2:35pm	Observing Integrated Forensic Science Unit
18-09-2000	Monday	11:15am – 1:00pm & 2:35pm – 3:30pm	Observing Integrated Forensic Science Unit
19-09-2000	Tuesday	12:05pm – 3:30pm	Observing Integrated Forensic Science Unit
20-09-2000	Wednesday	2:35pm – 3:30pm	Observing Integrated Forensic Science Unit
21-09-2000	Thursday	10:00am – 1:45pm	Observing Integrated Forensic Science Unit
		1:45pm – 2:35pm	Dress Rehearsal
22-09-2000	Friday	9:10am – 10:00am	Presentation of trial and awards to students for their role in the Integrated Forensic Science Unit

## The Main Study

Date	Day	Time	Description
12-10-2001	Friday	11am	Interview teacher prior to commencing observations
16-10-2001	Tuesday (3 lessons)	9:10am – 3:30pm 3:30pm – 4:30pm	Observations of Integrated Forensic Science Unit Write-up field notes
17-10-2001	Wednesday (3 lessons)	10:00am – 1:00pm 1:00pm – 3:00pm	Observations of Integrated Forensic Science Unit Write-up field notes
18-10-2001	Thursday (3 lessons)	11:15am – 2:35pm 2:35pm – 4:00pm	Observations of Integrated Forensic Science Unit Write-up field notes
19-10-2001	Friday (5 lessons)	9:10am – 2:35pm 2:35pm – 4:00pm	Observations of Integrated Forensic Science Unit Write-up field notes
22-10-2001	Monday (5 lessons)	10:00am – 3:30pm 3:30pm – 5:00pm	Observations of Integrated Forensic Science Unit Write-up field notes
23-10-2001	Tuesday (1 lesson)	2:35pm – 3:30pm 3:30pm – 4:30pm	Observations of Integrated Forensic Science Unit Write-up field notes
24-10-2001	Wednesday (3 lessons)	9:10 am – 3:30pm 3:30pm – 4:30pm	Observations of Integrated Forensic Science Unit Write-up field notes
25-10-2001	Thursday (3 lessons)	10:00am – 1:00pm 1:00pm – 3:30pm	Observations of Integrated Forensic Science Unit Write-up field notes
26-10-2001	Friday (3 lessons)	9am – 10:00am 11:15am – 2:35pm 2:35pm – 4:00pm	Team Meeting Observations of Integrated Forensic Science Unit Write-up field notes

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29-10-2001	Monday (2 lessons)	11:15am – 1:00pm 1:00pm – 3:00pm	Observations of Above Our Heads Unit Write-up field notes
30-10-2001	Tuesday (1 lesson)	10:00am – 10:55am 11:00am – 12noon	Observations of Above Our Heads Unit Write-up field notes
1-11-2001	Thursday (2 lessons)	1:45pm – 3:30pm 3:30pm – 4:00pm	Observations of Above Our Heads Unit Write-up field notes
5-11-2001	Monday (0 lessons)	9:10am – 10:00am	Team Meeting (cancelled)
6-11-2001	Tuesday (2 lessons)	11:15am – 1:00pm 1:00pm – 3:30pm	Observations of Above Our Heads Unit Write-up field notes
7-11-2001	Wednesday (1 lesson)	10:00am – 10:55am 11:00am – 1:00pm	Observations of Above Our Heads Unit Write-up field notes
8-11-2001	Thursday (0 lessons)	10:00am – 10:55am	Team Meeting
9-11-2001	Friday (2 lessons)	1:45pm – 3:30pm 3:30pm – 5:00pm	Observations of Above Our Heads Unit Write-up field notes
13-11-2001	Tuesday (0 lesson)	9:10am – 10:00am	Team Meeting
14-11-2001	Wednesday (2 lessons)	11:15am – 12:05pm 12:05pm – 1:00pm 1:00pm – 3:30pm	Observations of Above Our Heads Unit Lunch in staff room Write-up field notes
15-11-2001	Thursday (1 lesson)	10:00am – 10:55am 11:00am – 1:00pm	Observations of Above Our Heads Unit Write-up field notes
16-11-2001	Friday (0 lessons)	10:00am – 10:55am	Team Meeting
19-11-2001	Monday (2 lessons & excursion)	10:00am – 1:20pm 1:45pm – 3:30pm 3:30pm – 5:00pm	WA Fossils excursion with year 7 classes Observations of Above Our Heads Unit Write-up field notes

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20-11-2001	Tuesday (0 lessons)	9:00am	Interviews with students today
21-11-2001	Wednesday (0 lessons)	9:10am – 10:00am	Team Meeting
22-11-2001	Thursday (2 lessons)	11:15am – 1:00pm 1:00pm – 3pm	Observations of Above Our Heads Unit Write-up field notes
23-11-2001	Friday (1 lesson & parent/teacher observations)	10:00am – 10:55am 11:00am – 1:00pm 1:00pm – 3:00pm	Observations of Above Our Heads Unit Year 12 parent/teacher luncheon at school Write-up field notes
26-11-2001	Monday (0 lessons)	9:00am – 10:00am 10:00am – 10:55am 12noon – 1:00pm 7:30pm – 9:00pm	Interview with teacher Team Meeting Interview with teacher Interview with parent
27-11-2001	Tuesday (2 lessons)	9:00am – 11:00am 1:45pm – 3:30pm 3:30pm – 5:00pm	Interview with parent Observations of Above Our Heads Unit Write-up field notes
28-11-2001	Wednesday (0 lessons)	8am – 9:30am 10:00am – 11:00am	Interview with parent Interview with parent
29-11-2001	Thursday (0 lessons)	9:10am – 10:00am	Team Meeting
30-11-2001	Friday (2 lessons)	11:15am – 1:00pm 1:00pm – 3:30pm	Last day of observations of Above Our Heads Unit Write-up field notes
4-12-2001	Tuesday	10:00am – 11:00am	Interview with teacher
7-12-2001	Friday	9:00am – 11am 11:30am – 1:00pm	Interview with teacher Interview with parent
10-12-2001	Monday	10:30am – 11:30am 12noon – 1:30pm	Interview with parent Interview with parent

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## **Appendix B:      Permission documentation**



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## TO PARENTS OR GUARDIANS OF STUDENTS IN YEAR 7 AT THE COLLEGE

Dear Parent or Guardian,

This letter is to introduce myself and to explain what I will be doing in your child's classroom over the coming weeks.

I am a PhD student at the Science and Mathematics Education Centre, Curtin University. I have experience of Mathematics/Science teaching in schools throughout Australia and currently have three children attending this school. As part of my research I will be observing classes run by **Ms Manor**, looking at the integrated aspect of the units observed. I will work together with **her**, in the classroom, and will take written notes and make audio-recordings of what I am observing. I will also be calling on the opinions of parents, of some of the students observed, and would be grateful of your support in this endeavour. Obviously, any interviews would be at your convenience and I will be contacting several parents, on **her** recommendation, at a later date in order to arrange this. I also wish to interview several students about their opinions of the units studied.

During my time in the classroom, information will be gathered through observing, assisting, listening and participating in the activities. Pseudonyms will be used in all transcripts so that individuals cannot be identified and confidentiality can be assured. Students may exclude themselves from the research endeavour or withdraw at any time. Information about successful models of integration is valuable to teachers in this and other schools who wish to embark on similar projects.

A pilot study was carried out last year with a group of year 7 students and I thoroughly enjoyed the experience and the opportunity to assist in such a creative environment. If you have any questions, concerns, or simply wish to know more about the project then please feel free to contact me at Curtin University ph: 9266 3792 or on my mobile: 0417 78 5589.

Yours sincerely,

Robyn Chien BSc <sup>HONS.</sup> Dip Ed  
(PhD student)



### INTERVIEW PERMISSION

Earlier a note was sent home with your daughter advising you of my participation in the classroom over this term. I have been gathering observations of the classroom and have reached the point where I need to conduct interviews.

After discussion with Ms Manor, I will interview students during class time but after they have completed the required work. This way they will not get behind and will not be required to miss out on lunchtime in order to fit in an interview. The opportunity to reflect on what they have learnt and the manner in which they have learnt it will provide them with an additional and valuable learning experience in itself. I will give them the opportunity to choose to come with a partner for the interview or alone.

Before such interviews can be conducted I require your written permission. Please be assured that all information is confidential and that all people involved will be given pseudonyms to protect this confidentiality.

In addition, for my research, I need to gather your own ideas about learning and the work you see your children doing. This provides the background to their learning and the school. In order to do this I would like to arrange an interview, of about one hour, with you, at your convenience. To discuss this and arrange a time, in the next two weeks, you can either call me at home after 8pm on 9368 5589 or include your phone number on the permission slip attached for me to contact you.

Thanking you for your participation. I look forward to meeting with you. Please return the permission slip to either Ms Manor or myself by Monday 19<sup>th</sup> November as I wish to commence the interviews then. If you have any questions please feel free to call me this weekend to discuss them.

Yours sincerely,

Robyn Chien BSc <sup>HONS</sup> Dip Ed  
(PhD student) 15/11/01

----- cut off and return to Ms House by Monday 19<sup>th</sup> November -----

#### PERMISSION SLIP

I \_\_\_\_\_, give/do not give permission for my daughter, \_\_\_\_\_ of form \_\_\_\_\_, to take part in an interview with the researcher. I understand that all information will be given in confidence and that pseudonyms will be used to protect anonymity. I acknowledge that we can withdraw from the research at any time. I have provided my phone number to indicate my willingness to be involved in the parent interviews or I will contact the researcher this weekend to discuss the matter.

Phone No: \_\_\_\_\_ Best time to be contacted \_\_\_\_\_

Signature of parent/guardian \_\_\_\_\_ Date \_\_\_\_\_



## **Letter to Principal**

25-Sep-01

The Principal,

As a parent of three children at The College I am sure that you know of me and are aware of the research that I am doing. I am at the Science and Mathematics Education Centre of Curtin University, doing a PhD. Last year I was involved in carrying out some research at The College in the area of “integration”, organised through the Head of Middle School and Ms Manor. I was fortunate enough to have been allowed to observe an integrated unit taught by the year seven teachers and to observe the classroom of Ms Manor for several weeks. This initial research has led to my developing my PhD proposal further and I would appreciate it if I were permitted to continue my research, in integration, by observing further classes of Ms Manor’s this year. I have discussed this with Ms Manor and she has indicated her willingness.

Last year’s observations pointed to the need to expand my focus and as a consequence I would appreciate it if I were able to interview you, and the Heads of Junior, Middle and Senior Schools, as well as some other willing staff members, to get a more complete representation of the school’s positioning towards the idea of “integration” and where it fits within the official curriculum of The College. Obviously this would be considered a privilege and any interviews would be carried out at the convenience of the person in question. In addition, I would like to obtain

official school policy documentation about the curriculum so as to seat my observations of “integrated units” within the official context of the school. I do not wish to misrepresent the school, hence my desire to obtain official documentation. Pseudonyms will be used in the thesis in order to guarantee anonymity and contributors may withdraw from the research, at any time, if they so desire. I will contact the necessary people after receiving your approval.

I have attached a draft letter that could be sent out to the parents of the children involved in Ms Manor’s classes to be observed, making them aware of my presence and the reasons for it. I would appreciate any comments you may have in regard to this letter.

Obviously the timing of my visits will need to be worked out with Ms Manor and I am conscious that there may be some inconvenience. One of the units I intend to observe commences week one, term four. I will endeavour to minimise any inconvenience and work with Ms Manor so as not to cause any disruption to staff, students or parents.

Yours sincerely,

Robyn Chien BSc HONS. Dip Ed

## **Letter to Head of Middle School**

25-Sep-01

Head of Middle School,

I was most pleased with the time I spent at The College last year observing and helping with Ms Manor's classes. It was a valuable experience for me, and one I could not replace. The observations I made last year changed the course of my research and this year I would like to be able to continue, with Mr Case's and your permission, with further observations of Ms Manor's classes during the teaching of the forensic science integrated unit.

The additional changes to my thesis require that I seat the observations of the integrated unit within the context of the school and to this extent I would request that I could gain access to the curriculum documentation of middle school and carry out interviews with yourself and others who would be able to enlighten me. All interviews will be arranged at your convenience and no one need feel under an obligation to provide me with an interview. All observations and documentation would be considered confidential and pseudonyms will be used.

In addition, I would like to observe a further unit of study, which fits into the category of one that is more typical of the curriculum at The College. For the research it would be best if this were also a year 7 unit, taught by Ms Manor and involving the students involved in the observations of the 'integrated' unit. Ms Manor has indicated her willingness to allow me access to her classroom and I am looking forward to the time I will be spending at The College in fourth term with her.

Attached is a copy of the letter I will be sending home to Ms Manor's students. Mr Case has already received a copy but if you have anything else you would like to see added or any alterations, I will do this before next term.

Yours sincerely,

Robyn Chien BSc HONS. Dip Ed

## **Appendix C: Interview questions for principal**

I want to endeavour to cover all of the questions I have here but one hour might not be enough time. I'd like to start with your values in education and then proceed to link them to the curriculum at The College. How you view integration in terms of the three different schools at The College and the influence various groups have on the official curriculum of the school. Then a quick exploration of the process for airing grievances by parents, students and staff and the influence that these groups have on school curriculum policy.

Describe to me the values you regard as important in education and what your "ideal curriculum" might look like.

- Why are these issues so important?
- What happens if they are neglected?

How do you see these values translated into the curriculum at The College?

- How well do you feel The College supports these values?
- What can be done within the school to improve?
- Are there any insurmountable obstacles towards implementing your ideal curriculum within this particular school?

What are your views on "integration" in terms of the curriculum?

- How do you feel The College tackles this issue?
  - Within school?
  - Utilising contacts outside of the school?
    - TAFE?
    - University?
    - Other schools?
    - Industry?
- What provisions are made in the curriculum for its inclusion?
- What are the difficulties/benefits associated with integration?
  - Junior School?
  - Middle School?
  - Senior School?

Do you feel that teachers at this school are supportive of integration?

- What opportunities are there for them to diverge from what would be considered an academic curriculum?

What words would you use to describe the conduct, character and manner of staff at the school? Of students?

How much influence do you feel your personal view towards education has on the official The College Policy?

How much influence do school councils, committees and parents have on official school policy?

How do you feel parents and students perceive the school?

- In your opinion, do parents at the school have much influence over the eventual curriculum at the school?
- Do you believe they should have an influence? Why? Why not?

Why, in your opinion, do parents send their children to The College?

- Or elect to move them to a different school?

What is the process for parent/student grievances?

What is the process for staff grievances?

## **Appendix D: Interview questions for Ms Manor**

Could you describe to me your goals (reasons, aims, objectives) for this integrated unit?

How would you describe this unit?

What do you intend for the students to learn from this unit conducted in this manner that they would be unable to learn in a more traditional manner?

What content do you particularly want the students to become familiar with?

What skills do you believe you are enhancing by conducting such a unit?

To what degree have the other teachers who are teaching this unit been involved in the development of the unit?

- Could you elaborate?
- Would they have as much or as little input in the more traditional units offered by the school?
- Could you give me an example?
- Describe the actual process you and the others went through to develop the unit.

What guidelines have been developed for yourself and the other teachers to follow when teaching the unit?

How much freedom do students have to work at their own pace?

Who would you say has most control over the timing, sequencing and pacing of the unit?

Do the students have control over which social group they work within or where they sit?

What words do you anticipate you will be able to use when asked to describe the students' conduct, character and behaviour or manner throughout this unit?

What criteria for evaluation have you developed?

What feedback processes have you put in place for yourselves and the students?

- Why did you feel it was necessary to do this?

You ran this unit in a different format last year.

- Could you elaborate on the key changes you made and your reasons behind these changes?
- Did you seek the opinion of the other teachers involved about these changes?
- What were their reactions to your suggestions?
- Do you feel they have been instrumental in the changes and the design of this unit or do you feel that they have generally been happy to go along with your suggestions?

Is there anything in particular about this school that makes it easier for you to run units such as these?

Is there anything about the school that makes it difficult?

How much influence does school policy have on what you decide to do within your own classroom? The classroom of others?

Do you have any problems or uncertainties about conducting units such as this?

- Could you elaborate?

What do you think parents' reactions are to these types of units?

- Explain.
- How do you feel about this?

Do you think students enjoy this style of learning?

- Why? Explain.

What is your understanding of 'integrated'?

What changes do you feel would be necessary within a school for you to be able to implement the type of curriculum you would like to? No restrictions!

- What would this school look like?

**Key idea to talk to Ms Manor about**

**Read this to her at interview at end of unit and ask her how she feels about it.**

Bernstein believes that the vagueness inherent in an integrated curriculum could produce a system where both students and teachers have no real sense of purpose, place or time. He suggests that teachers involved in integration must come to a <sup>1</sup>consensus about the integrating idea before they continue. Once devised the integrated curriculum <sup>2</sup>must have implicit guidelines for the teacher and there <sup>3</sup>must be a feedback system in place for teachers and students. There <sup>4</sup>needs to be clear criteria for evaluation. Without this there will be a lack of definition or 'rigor'.

## **Appendix E: Interview questions for teachers**

Describe the decision making process within the school. Do you feel that individual teachers really have a say?

What is the pedagogical basis for these decisions? Are decisions made largely based on “how the student learns” or is it largely monetary, convenience or “the only way we could think of at the time”?

Suggest some words that would adequately describe:

- The overall impression that the school presents to people outside.
- The management and decision making process in the school.
- The staff.
- The students.
- The parents.

How would you describe the overall relationship of the school with external factors?

- The workplace.
- Other institutes of learning.
- The parent body.

How much influence does school policy have on what you decide to do within your own classroom? The classroom of others?

What is your understanding of “integrated”?

How do you feel about the success or otherwise of the integrated “Forensic Science Unit” now that it is over?

What things would you like to do differently next time and why?

How important do you think social factors are in this type of unit compared with a ‘normal’ unit? Explain what you understand by social factors.

Do you feel you had enough input to the planning of this unit or were you happy to go along with Kerrie?

Do you feel that there needs to be greater collaboration between teachers for this to be successful for all classes? What factors make this difficult? Possible?

What are your opinions about the following quote?

- Bernstein believes that the vagueness inherent in an integrated curriculum could produce a system where both students and teachers have no real sense of purpose, place or time. He suggests that teachers involved in integration must come to a <sup>1</sup>consensus about the integrating idea before they continue. Once devised the integrated curriculum <sup>2</sup>must have implicit guidelines for the teacher and there <sup>3</sup>must be a feedback system in place for teachers and students. There <sup>4</sup>needs to be clear criteria for evaluation. Without this there will be a lack of definition or ‘rigor’.

Would you like to see a completely different structure to the school day for Middle School? Explain. Why/why not?

What do you feel is important for students to learn? Do you feel you are addressing this adequately or could you do more? Explain.

Do you feel that some students experience confusion over the different ways teachers have of running their classrooms and explaining things? Do you feel that these are problems that are subject-specific? What can be done to address these issues, if there are any?

Do you ever take time to explain why you do and say certain things or do you just assume that students will understand the meaning behind your way of doing things?

Is there a language of explanation specific to your teaching area? Is this an easy concept for the students to grasp? Have you specifically tried to teach this “language” or do you encourage your students to put everything into “their own words”? Are “their own words” adequate to convey the details required of your subject area?

## **Appendix F: Interview questions for students**

### Classification

How do you think your teachers expect you to behave at school? In class, at assembly, in form, at recess/lunch, in Chapel, at home time, etc?

How do Mum and/or Dad think you behave at school? Is school anything like what Mum and/or Dad think it is? Explain.

What sorts of things are important for you to learn?

What sorts of things do Mum and/or Dad think it is important for you to learn?

What do your teachers think you should learn?

Describe the types of lessons you think you learn best in. What is it about these lessons that help you to learn?

What things do you enjoy about school? What things would you be happier without?

### Questions about the language of the classroom (Recognition/Realisation Rules):

- Does your science teacher explain things differently to your Maths teacher, your English teacher and your SOSE teacher?
- Do you find it more or less difficult to understand your science teacher compared to your Maths, English and SOSE teachers? Explain.
- Is there a special way of ‘speaking’ for each subject area even though it is all in English?
- Do you find it hard to explain things the way your teachers want you to? Explain.

### Motivation

- What does it mean, “to be responsible for your own learning”? Do you think you can do this? What sort of help would you need? Do you think you need to be responsible for your own learning yet? Or does it come later?

Why do you think your teachers wanted to get you to do the Forensic Unit?

### Recognition/Realisation Rules

- What did you learn in Forensic Science? Could you explain chromatography for me?

In what ways, if any, is the unit you are doing now, “Above our Heads”, different from the integrated “Forensic Science” unit?

Do you think that you have learnt things, by doing this unit that your teacher would not have expected? What for instance?

### Framing

- Who has control over the work you do at school? Was it different for each of these units? (Timing, sequencing, pacing etc.) (Instructional Discourse)
- How did your relationship with your group members affect the time doing the unit for you? (Regulative Discourse)

### Assessment

- How do you think your teachers decide how well you can do the work? Do you feel that sometimes they really can't tell how well you could do the work? Explain.
- Does the knowledge that you will be given a grade or mark affect how you behave in class?

## **Appendix G: Interview questions for parents**

- What are your professions and academic qualifications?
- How many children do you have at The College?
- What were your reasons for sending your daughter(s) to The College? Explain. (Co-educational?)
- Are you, in general terms, happy with the school? Explain.
- What do you want your daughter(s) to learn from being at The College that you feel she wouldn't learn elsewhere?
- How do you envisage classes are conducted at The College?
- What do you feel it is important for your children to learn?
- List some words that you feel would adequately describe The College.
- In your opinion, what is the job of schools and how should they go about doing this?
- Is the line of communication between The College and the parent body operating well enough?
- Are there any changes you would like to suggest?
- With regard to communication with the school, are you concerned about the general policies and running of the school or are you only interested in communicating with your children's teachers regarding her academic and/or co-curricular progress? Explain.
- Are you happy with the reporting system at the school? Is it a fair indicator of your daughter's progress?

- How do you feel about the awards system in the Middle School? Is your daughter fairly recognised or do you feel she is often overlooked? How does this affect you? How does this affect her performance?
- Does your daughter tell you much about what happens at school?
- Do you understand how the school operates with regard to its policies on behaviour, punctuality, computers, homework, rewards, punitive action, the timetable, assemblies, Chapel, co-curricular activities etc.? Describe what you think would be considered appropriate for each of these areas.
- Do you know anything about the integrated “Forensic Science” Unit that the girls have not long ago completed? What do you know? Has there been a difference with her motivation towards her schoolwork while doing this unit?
- What do you think were the teachers’ reasons for attempting this unit and has it been successful?
- Were there aspects about the unit that were not successful? What were they and how could this be improved upon?
- Do you know what is being studied in science at the moment? Elaborate if you can.
- Have you noticed any difficulties your daughter appears to have with expressing herself in the way the teacher finds best? Does she sometimes complain about the style of language she is expected to use and not appear to know how to use it or how she should express a certain point of knowledge?
- Does she come home sometimes and complain that the teacher “was speaking a different language today”? Explain. This could also relate to a problem outside of the classroom.
- Does the teacher ever try to teach her how to express herself in science or mathematics or SOSE or English? Or any other subject your daughter is taking? Or ever explain that sometimes there are certain ways of saying things that are more correct than other ways for that particular subject?

- Is the emphasis on expression generally speaking to put things “in your own words” and then when your daughter does she is marked wrong? Sometimes do you feel that the teacher just hasn’t understood what your daughter wanted to say?
- Would you be happy if the school decided to change the entire structure of the middle school and attempt something radically different in an attempt to improve the standard of learning?
- What assurances would you need to be given first? Do you think ‘school’ is fine the way it is?

## Appendix H: Example of a Document Text Report from Nvivo

NVivo revision 2.0.161 Licensee: Division of Engineering & Science

Project: Analysis of Transcriptions User: Administrator Date: 11/11/2003 -  
2:08:51 PM

### DOCUMENT TEXT REPORT

Document: Interview Ms Manor 7-12-01

Created: 27/11/2002 - 1:19:19 PM

Modified: 26/09/2003 - 2:30:01 PM

Description:

Interview with Ms Manor

Document Text:

1: §1 Interview with Ms Manor

2:

3: Interview commenced on 7-12-01.

4:

5:

6: Researcher: Can you describe the decision making process within the school and do you feel that individual teachers really have a say?

7:

8: Ms Manor: Are you talking generally about things?

9:

10: Researcher: You can maybe focus on curriculum issues to begin with.

11:

12: Ms Manor: I think in terms of curriculum issues we do have quite a say. Being semi-autonomous educators of course you've got a reasonable amount of say over what you do. In the middle school particularly you have a lot of say over what you teach, how you teach within of course the constraints of using laptop technology and the curriculum framework things that are coming in. It does give us a lot of flexibility. Chris Hawkins, for instance is the middle school curriculum coordinator for science and he is a great ideas. For instance we had a meeting the other day about the new integrated unit we're going to have next year. He's going to help us out with that, so he's talking about how he'll get the curriculum framework stuff sorted out for us because of course we'll have two subject areas working together so we'll need to look at the overlapping and complimentary outcomes. This is social science and science together within an environmental based unit. So in terms of curriculum I feel that I have a lot of freedom within the normal constraints of you know ... remembering you are preparing them for senior school, you've got your laptop things and ... We also have a lot of say over things like, for instance, we've changed the reporting format and we are going to change it again, as things evolve they will have to change as well, so there is a reasonable amount of flexibility from that perspective. The only constraint really is expertise in terms of our knowledge of what we want,

like we sort of know that this is not right or we want to change it but we are not really sure what to change it to. Melissa is quite responsive to that, she's got ideas about portfolios or the reporting format, they want to change it to a conferencing thing for next year, the year sevens are going to trial that so there's always the different, I think there's quite a lot of freedom.

13:

14: Researcher: You mentioned the word evolution. Do you think that at this school in particular you are freer to allow things to evolve and change as you feel they are needed?

15:

16: Ms Manor: Oh definitely. I think part of that is because in a normal high school you'd have a head of department and the head of department would control the curriculum. Heads of departments traditionally are TEE focused and they are very traditional about who teaches what and the men teach physics and chem. And the women teach biology, human biology.

17:

18: Researcher: But you've got Chris, you'd classify him as head of science for middle school.

19:

20: Researcher: For middle school, but that's in terms of his experience rather than the fact that he's older or ... no he's not, he's very young. He's a very inclusive person as well and is prepared to look at cross-curricular things with Linley and I is a good indication of that. And he's also taught maths and science so um ... He's typical in his gender but I don't think that his attitude he's a typical male head of department. (Laughter.) John Clarke isn't either, he's head of senior school science and he's very supportive of middle school and basically says, "I trust you professionally and we've got a good middle school curriculum coordinator."

21:

22: Researcher: So would you have discussed any of the ideas of integration, of what's happening in the middle school with ...

23:

24: Ms Manor: With John? No.

25:

26: Researcher: ... the senior school departments? Do you have a good idea of how they feel about it?

27:

28: Ms Manor: Um, ... no I don't actually. I very rarely talk to John because he's busy doing his thing and I'm busy doing mine.

29:

30: Researcher: The idea of senior school, the way it is structured and everything is very, very traditional.

31:

32: Ms Manor: I don't know that they necessarily like that. Um ... a lot of people who teach senior school. John, in some sense, is a chem. Person and he's quite realistic, he knows that the idea is to get them into university. That's what his goal is for the senior school. To achieve their goals, whatever they be, whether to get into medicine or a TAFE course. It doesn't matter.

33:

34: Researcher: That's where it is different at this school. You have a very high percentage of students going on to university.

35:

36: Ms Manor: Yes, we do whereas a lot of other schools don't. So what we've got to be careful of is catering for the non-TEE students, which I think we do reasonably well.

37:

38: Researcher: At least in terms of TAFE and ...

39:

40: Ms Manor: mmm and those INSTEP programmes and work experience and all that sort of stuff. Senior school is about to undergo its evolution with the Post-Compulsory recommendations and with a new head of school who's interested in how to make the senior school unique. I've got a few ideas about that myself, but she will develop that culture I guess you could say, of senior school and what it means to be in senior school and how it's different ...

41:

42: Researcher: So you can see senior school now taking on a bit of an evolutionary process?

43:

44: Ms Manor: Well we had a staff meeting, well not a staff meeting, a science meeting the other day, we were talking about it and I said, "Year ten needs to be seen as a transitional phase in preparing for senior school and giving them opportunities to develop their skills. (An interruption as a teacher comes in to speak to Kerrie; recording was paused for a few minutes.) Yeah, we were talking about the evolution of senior school and how Meg needs to look at what its role is. It's not the chop off point for lower school any more, it's actually the launching point for senior school therefore it needs a different ideology about it, a different philosophy about it. You're given the opportunity here to prepare these students and they should be thinking about what key skills they want them to learn. It's not simply a case of making them a defacto middle school, because they are talking about having teams in year ten and my response to that is, "That's a great idea, what's the purpose of the team?" There was sort of like this, "mmmmm" and I said, "Well you need to think about it. What is the purpose of having the team? Our purpose is pastoral care, for instance, in year seven and year eight particularly and in year nine it's more curriculum based. In year ten, I sort of got the distinct impression it's because they wanted to have two meetings periods per cycle, (Burst into deep laughter.) I'm sure that was a purely cynical response but I would be looking at developing the curriculum in the programme and offering them opportunities to go, like I used to when I was teaching at Nannup, take the students to UWA and to Curtin and to Murdoch and talk to people and look at departments and find out which university suits them, which culture suits them, which courses suit them, how do they picture themselves in three years time, because they're setting those invisible goals. When I see myself at 18 I see myself strolling with my handful of books and my back pack and my bike through the grounds of UWA or whatever it happens to be. That's what motivates students'; it's not necessarily the pressure of the TEE.

45:

46: Researcher: The team concept I think even through to year twelve is a good idea because it allows the opportunity for teachers to get together and discuss ideas and overlaps, for instance, "What can we do in maths to reinforce this skill that's not coming through so well in science?"

47:

## Appendix I: Example of a Node Report created by Nvivo

Document 'Interview Ms Manor 7-12-01', 6 passages, 3832 characters.

Section 1, Paragraph 140, 327 characters.

Ms Manor: Mmmm, it's just a stepping-stone. The forensic part of it is just a stepping-stone into giving them an opportunity to see beyond. It's an extension of my course. They talk about how to collect fingerprints and how to collect hair samples and all that sort of thing, this is what you do with it once you've got it.

Section 1, Paragraph 144, 526 characters.

What I liked about, and I have to admit this is boring, is the increased content contribution of the subjects. You know, they did mapping and they did the survey in maths, there was less emphasis on the English component this time but then they did the characterisations. My group didn't do that very well which is probably in some respects my fault because I was too busy worrying about the trial; I saw that as the pinnacle. The SOSE side of it, the trial part, they were saying how much they learnt about the trial process.

Section 1, Paragraph 152, 511 characters.

Ms Manor: What I am going to do next year with my interview with a famous scientist is get them to do the characterisation and role play and I'll just make that our semester one task. They will actually get the opportunity to do more role-playing and to be in character. It reinforces what happens in English. That's why having taught every subject, the overlap and the capacity to support and extend each other is almost limitless. Most people don't realise it because they have never taught anything else.

Section 1, Paragraph 164, 150 characters.

Ms Manor: Next year we've got a new team so I will have to feel them out a bit, see how they respond to things, and what they want to bring to it.

Section 1, Paragraphs 202-204, 1254 characters.

Researcher: It was quite obvious to me that this year there were some girls working on their own for some aspects and then they would join in with a group of two or three for other aspects.

Ms Manor: That's important; we can't be rigid about things. Just from my organisational perspective, just because it is convenient for there to be four groups in a class and they have to be of size six or whatever it happens to be, doesn't mean that it is convenient for them. We've got to remember we are supposed to be taking into account their different learning styles. If you take someone like Jane for instance, she prefers to work on her own for a lot of reasons. There are other girls, who also prefer to work on their own, but there are others who need to work with others, you look at someone like Sophie for instance who loves working with other people and she gets a lot out of it. If she was to work on her own her confidence level would just drop. Some girls like to work with a partner because they are not very good with their literacy skills and they feel out of it if they are with another group, they can't quite articulate their responses but working together they love it, they are with someone who they consider to be their equal.

Section 1, Paragraph 212, 1064 characters.

Ms Manor: We do structure the unit so that the students can do it themselves. So therefore it doesn't matter which teacher they have. I actually quite like the idea of the teacher's personality comes through and that they respond to the personality of their class. I've structured for green group big chunks and made it explicit what I wanted because I had to. Whereas other groups don't need to have that done or a group might have had a lot of drama girls in it, they will be different to what my class is. You've got to be fluid; you've got to be understanding of the fact that each teacher is different. Probably it wouldn't hurt to have them, if you structure it properly it's fine, if you have everybody putting in their bit then at least you know that the part that they put in with their class is done the way they wanted it to be and another class will have their teachers component done the way they

wanted it to be done so at least you get a quarter of it done the way it was originally intended and the rest of it should be sufficiently stand alone.

Document 'Interview Ms Corr 26-11-01', 11 passages, 7932 characters.

Section 1, Paragraphs 173-179, 1056 characters.

Researcher: OK, that's fair enough. What is your understanding of integrated?

Ms Corr: Oh, that's a good one. Integrated, my understanding is when, this is going to sound very layman like, when you combine certain aspects together, um, with the intention of um, oh that's a good question actually. Integrated I think is when you, I'll talk specifically about integrated subjects, when you combine them with the view to demonstrating or helping the girls to understand the transfer of skills and to make things not subject specific but actually to hopefully enhance their relevance to the girls so that they can, you know, it's not just English or maths but that it is an important skill to have and when I think of integrated I think of stronger as well.

Researcher: OK, that's interesting. Do you think largely in terms of subjects or do you think that it's the easiest way to describe it but maybe you don't want to be thinking in terms of subjects.

Ms Corr: Yes, I'd rather not think of subjects, but it is the easiest way because that's the way it is.

Section 1, Paragraphs 201-211, 992 characters.

Researcher: What about the organisational skills? Do you think it could have helped them with that?

Ms Corr: It could have, but I think, and this is just from me working with the blue group, I found that we didn't take enough time out to, they had that plan that they had to do but there was no real reflection even at the end of each day about what have you accomplished. I just feel that from the perspective of the blue group it was fairly adhoc, you know, work on this, work on that.

Researcher: So it wasn't structured for them and they didn't structure it for themselves.

Ms Corr: No, they didn't take any responsibility for getting organised.

Researcher: How did you get them organised?

Ms Corr: A couple of girls just became the leaders and organised the rest of the class. But I had a lot of girls wandering around going, "I don't know what to do?" And I'd say, "Have you done this or that and go and look at this or that", but um, just no sense of taking the initiative I suppose.

Section 1, Paragraphs 227-231, 1214 characters.

Ms Corr: I'd like to rethink, the trial was the only truly integrated thing whereby it was, 'cause I didn't think of it from a social science point of view and I just, don't tell Ms Barter, and I don't think the girls in my class did either. Rather there was this activity that was unrelated to anything and they were going to try and draw in whatever they needed and so I found that the best part of the week. The rest of it although, I didn't even feel was preparation for that; there were a number of separate activities that needed to be done so I'd probably like to leave that out.

Researcher: What about integrating the evidence into the trial, did your group manage to do that?

Ms Corr: They did it in terms of holding it up and saying what it was but still struggled to be convincing about how it proved somebody innocent or guilty. What I think would be better would be actually to look at those sorts of skills, have some activities designed to prepare them for that earlier on in the week. Like I think for example, the mapping that's great but at the end of the day that was just another activity. Rather than lets get them to do some role-playing or whatever where they tried to use a bit of evidence.

Section 1, Paragraphs 253-255, 520 characters.

Researcher: So there were other things that they got out of it but mostly not what was intended?

Ms Corr: Yes. I think my criticism of the unit lies within that integration aspect, but at the same time, even those individual, you know separate activities that they had to do I think even on there own they were fairly, the girls certainly learnt something from them. Yes, and so I don't think it was a waste of time but I was critical of some of those things, the time could be better spent in preparation for the trial.

Section 1, Paragraphs 267-285, 1205 characters.

Ms Corr: Yes, last year was our first year. I just think you've got something that works and whereas last year, because we spent so much time preparing, this year we saw it as something, you know, I saw it as something kind of all ready there instead of a big thing to work at I saw it as a, "Oh good we've got that organised".

Researcher: OK, so one less thing to have to worry about?

Ms Corr: Yes.

Researcher: And then you looked at the changes individually rather than getting together as a group and discussing the changes and what you'd planned to do and ...

Ms Corr: Mmmm.

Researcher: Have you actually sat down as a group and discussed what you want to get out of the unit?

Ms Corr: Well I think we would have last year, but I don't feel we did that this year. I think we just sort of took it for granted that that was what we were going to do and I think we all kind of had an idea but ... (trails off).

Researcher: There were a lot of changes though and now in hindsight at least you're feeling that those changes didn't address what you had hoped they were addressing in the first run of it.

Ms Corr: Mmm.

Researcher: So there needs to be some sort of reflective process on it before next year.

Section 1, Paragraph 319, 513 characters.

Ms Corr: Because having said that, on the one hand I agree with it where you then modify the behaviours and the interactions to suit the outcomes but then on the other hand I took the opposite tact during the forensic week where I went, "OK," I had a chat to the girls about it and I said, "You know what you need to do and we will just see what happens." At one point, as I said, I thought it was going to be a disaster and I was kind of almost happy for it to be because I thought that was a learning experience.

Section 1, Paragraphs 325-327, 620 characters.

Researcher: I suppose that's also a normal part of life. Do you feel that there need to be greater collaboration between teachers if the unit is to be successful for all classes? Or do you think that the success of the unit need not necessarily be judge the same way for all classes?

Ms Corr: Yeah, I agree with that. I don't think, the success to me isn't the same for all classes or for all girls, even within my class I could see some girls obviously got more out of the unit than others, but I don't think there needs to be more collaboration because I think we're all working towards a sort of common goal, sort of.

Section 1, Paragraphs 361-363, 1209 characters.

Researcher: What are your opinions about the following quote? Bernstein believes that the vagueness inherent in an integrated curriculum could produce a system whereby students and teachers have no real sense of purpose, place or time. He suggests that teachers involved in integration must come to a consensus about the integrated idea before they continue. Once devised the integrated curriculum must have implicit guidelines for the teacher and there must be a feedback system in place for teachers and students. There needs to be clear criteria for evaluation without this there will be a lack of definition or rigor.

Ms Corr: Oh, that's very interesting. I don't know if the vagueness is necessarily inherent, that was my initial reaction to that part. I think there must be (very long pause while thinking) I think I agree that there needs to be strong guidelines, you all need to know where you are going, explicitly even but I suppose my initial response to this was just be careful because I like the idea of, now he might interpret this as vagueness, but I like the idea of a unit like that allowing you to kind of go off on tangents if needs be, allowing the students to kind of meet the challenge.

Section 1, Paragraph 367, 148 characters.

Ms Corr: As long as it allows for flexibility and diversity, I suppose, then I think that there does need to be a clear sense of where you are going.

Section 1, Paragraph 371, 250 characters.

Ms Corr: With that, I was thinking about it and some might see that as a bit too much involving the teacher for the week whereas I don't think that that input from the teacher means that it is not student centred or they are not taking responsibility.

Section 1, Paragraph 375, 205 characters.

Ms Corr: Yes, exactly. That bit of the definition about, "without this lack of definition and rigor" and it was that rigor that was lacking in the blue group I thought. So Bernstein's on to something there.

Document 'Interview with Ms Manor 12-10-200', 31 passages, 35812 characters.

Section 0, Paragraph 35, 916 characters.

Ms Manor: So yeah, so...we've sort of given ourselves a little more breathing space. And, although writing stories I thought was great from that perspective of getting them to work together and you know the English side of it, I thought it was just a fraction stressful for them, to try and do that. Because writing a story's not easy anyway, writing a story with a group of people was the source of our conflict, so this time I've written a story for them, but I've made it so that there's a lot of the integrated things, there's much more integrated aspects of it I think this time, as a result, because before there were very heavy English and Science components because of forensics and the writing of the stories. This time it's had (something), there's mapping, there's survey for the maths, so we've actually made it much more integrated, much less, they don't need to come up with the story in the first place.

Section 0, Paragraphs 67-71, 1964 characters.

Ms Manor: So there's the science. In English they've been doing character profiles, looking at stereotyping, looking at stories and how they have a beginning middle and end, the climax and this that, you know all those sorts of aspects of English. So there's the story that I've written for them and Ms Corr is also thinking of writing after this, writing alternative endings or similar sorts of stories, and...

Researcher: And she did it in English?

Ms Manor: She did it in English...yeh. In maths they've been doing chance and data, which, and they've been looking at surveys and looking at how to graph and do all those types of things. I've written a survey for them, with the ...we've been able to write 3 or 4 more questions based around what types of crimes have people experienced? Is crime a problem? Is the actual basis of that particular survey. So they have to work in a group to survey people, find out whether in fact they have experienced crimes, and whether they do think in fact that crime is a problem, in amongst the people that they know. So that's the max element of it. With SOSE (social sciences) they're doing um...mapping, and they...the story is set in South Perth, so they started in South Perth, they caught the ferry across, they have to wander through Perth and end up at the (Effi Crump?) theatre. And, so they actually have to follow the instructions and use the maps to find where they are going, and, I've sort of put in bonus points for them as well, so for instance, they have to work out which mode of transport is going to get them directly from South Perth to Barrack street, which of course will be the ferry, how much would it cost, how long would it take? If it's 10 O'clock and they arrive there, when would be the next ferry? You know, just to give them a little bit of additional research type things, and then Ms Barter when she returns from Paris, cause she's taken some students away, when she comes back she's actually going to...

Section 0, Paragraph 83, 1244 characters.

Ms Manor: Yeh well there is a part where they can get out and walk through the arts precinct and look at the Museum the art gallery the Alexander Library and end up at the Central Metropolitan Tafe, and then they catch the bus again. So basically we can drive around the block and pick them up and then take them off to where the (Effi Crump?) theatre is. It doesn't actually tell them that it's the (Effi Crump) theatre, they have to work it out from the clues that I've given them, cause I've told them that they need to use a map, a street directory...a map from a street directory, a phone book...there's something else as well...but I've given them sufficient starting points in the title of the theatre that they end up in. If they use a phone book they'll be able to work out what it is, from the description of what street it's on, where it is, and what park it's across from, they should be able to, the cluey ones, should be able to work out where it is. So there's the SOSE, English, Science and Maths all tied together, and I think much more, it's a much better integrated unit, now that they've had a bit of experience, a bit of practice at it, I think it's a much better tie together, all the skills that they've learned over the term.

Section 0, Paragraph 91, 1182 characters.

Ms Manor: But I also want them to see that all of the things that they've done have a specific...Like they're not just English things, they're not just maths things, they're all tied together, they're all related...but...the whole purpose of doing integrated units is so that they get a concept of the interconnectedness of the concepts and the skills that they develop, because teachers always complain about, you know, "I teach them to graph, and they don't know how to graph", and yet they do graphing in lots of different subjects for instance. "They don't know how to write an essay", yet they write essays in lots of different things, so you know, unless you're taught cross-curriculum, you don't understand that they actually do a lot of things repetitively and so...but they're not picking up on the links, so that's why we do the integrated units, is so that they see that there is a link between all of their subjects, that they're not necessarily (straight blocked states?) that they're actually there to build up a picture in this child's head about what it is, that subject is about, what that topic is about, or how they can best synthesise all that learning that they've had.

Section 0, Paragraph 95, 599 characters.

Ms Manor: When I'm doing introduction, I talk to them about the fact that you know this is an integrated unit, and what this means and how I want them to think about how all these things tie together, and that they all come together in a pool. I think...well I don't know, that sort of takes a fairly high level of thinking whether they necessarily would do that, but at least they have an opportunity to see, to actually go across...I mean keeping them in one classroom with the one teacher probably helps a little bit as well, so they're not doing the course separately, they're doing it all at once.

Section 0, Paragraph 99, 154 characters.

Ms Manor: Because really last time I think they thought it was all science. Was it (talking over each other)...and yet I was thinking it was mostly English?

Section 0, Paragraph 119, 2498 characters.

Ms Manor: I think...(pause) it's almost kind of...it's also interesting to look at it either from a concept or knowledge base, versus skills, attitude, value base. Like I could probably teach some, you know if you got them to sit down and you know stare at the board, I could probably fill their heads with a lot more knowledge about forensics for instance. I mean like sitting here at the table I've got articles from the newspaper, which talks about DNA as a tool for crime. I could look at it from a purely science perspective, and look at values and those sorts of things, and probably pump into their heads much more about the science aspect. If you look at this particular unit the science aspect is only a small part of it, because they're using skills they've already learnt. So really if you look at it from that perspective, they're not necessarily increasing their knowledge, what they're increasing is their...by applying their knowledge, they're deepening their understanding of it. And I think it's also about them working together, and applying what they're found out. So I don't know that they're necessarily going to be superstars about forensics, you know, and they're not necessarily going to be superstars about mapping or about graphing or about the character profiles and stereotyping either. What it's about is taking what they've done already and applying it in a different way to consolidate what they've learnt. So I think that that's probably more...you know like if we were sitting now in our respective classrooms, then you would take a much more content orientated view of it. Where as this way, it's about handing it over to them, and you watching what it is that they've done. And it's seeing them actually concretise what they've been doing in their separate classrooms, cause they are, they're all four separate classrooms, what have they done in those classrooms, they're bringing them together and seeing them apply it. So it's the application rather than them actually learning new things. They'll learn...they'll consolidate what they've learnt, and they'll realise that they can do a lot more than they've probably thought about. Or they'll discover that there are things they need to learn how to do, for instance there's a little bit of mapping stuff that they'll need to learn how to use a street directory or a White Pages or something like that. So they'll learn incidental things, but it's not about them necessarily increasing their knowledge in this particular...

Section 0, Paragraphs 129-131, 122 characters.

Researcher: So in some ways the integrated unit will help you to do that? (Integrate values.)

Ms Manor: Yes, yes it will.

Section 0, Paragraphs 135-139, 2442 characters.

Ms Manor: (pause) From a science perspective, I don't really, one thing to practice um...preparing the evidence and putting it into exhibits and actually creating evidence, as opposed to simply meet creative evidence and then analysing it. So it's going to be from a reverse angle, to see if they can actually prepare it, so that it's easy to use and it's reliable, and it picks up on the various aspects of the story. Um...I think from a content base I think they actually get more out of the mapping and the surveys because they are their new skills that they're going to learn how to do, or they've learnt a certain amount of it, but now they're actually going to push it to the next step, like that survey for instance, they know how to graph, they know how to do basic surveys like what

colour hair have the year sevens got and things like that. This time it's a different type of an application, it's much more complicated, so that actually would be probably what they would learn. They would specifically learn more about from that. And the character profile's they've already done that, so this is just a practice of what they've already done, and they're also going to create characters, they actually have to get dressed up, and they have to use the right walk for instance for their particular character, or right type of language, so they're going to have to stay in character during the course of that particular unit. So again I think that that's just an extension of what they've done in their English classes, but I think they're actually doing the learning about the Maths and the SOSE.

Researcher: Ok, and any particular skills that you think you'll be enhancing?

Ms Manor: I think their group skills and their negotiation and compromise skills in some respects, because for instance. I chose the story, wrote it specifically so that there were at least 8 characters that needed to be brought to the trial, then there's the people like the judge, the crown prosecutor and the defence council and the sort of people involved in the courts, and then there's the jury, so that makes up 25 people, and there's around about 25, 26 in each of the classes, so there's something for everyone to do. Um and so there won't be as much arguing over who's going to be this person or that person. Although I must admit we didn't have a lot of trouble with that last year, did we? The girls divided quite easily into what they wanted to do.

Section 0, Paragraphs 185-187, 543 characters.

Researcher: Ok, what guidelines have been developed for yourself and the other teachers to follow when teaching this unit?

Ms Manor: Oh, I don't think we have any guidelines. We are making it so each of the subject teachers has the opportunity to ah; it's sort of like an opportunity to extend the skills that they've already taught. So really I don't say to Ms Corr, 'you must do this' or Ms Felix, 'you must do this' or whatever, we've just decided that this is a great way of doing something that you wouldn't be able to do in (something).

Section 0, Paragraph 199, 2263 characters.

Ms Manor: With...Ms Barter booked me into the learning centre, so I've actually been down there, so I think, and also we changed the, we changed the way that it happened. When you look at the instructions, they're much more prescriptive in that there are specific things that they have to do, and so on, so that there's not so much opportunity for the teachers to take on board, um, their own particular vent. I know that that will happen, because in some respects, because of course um, with the drama component, Ms Barter's going to take that on with the character profile type things, I mean Ms Corr obviously will be very interested in them developing their characters and she will want to emphasise those types of skills. My emphasis, let me think now, what would mine be...I can just imagine that mine would be...the trial, because I've set it up, like the writing of the script and making sure it all ties together is extremely important, you know I'd better stick with them and make sure the evidence, like the person that gets prosecuted is in fact guilty (laugh). So I'll say that mine would probably be from that component, and also the survey, suppose (heading towards maths?) I guess and having the written survey and also having written the mapping thing (laugh) I think I'll have, that'll be my baby, so to speak. So and Ms Felix I guess will spend a bit of time, I mean Ms Felix is probably more um, prepared to let the girls flow with what they want to do, so I can imagine that she'll take on that survey type thing, but she'll just allow them to go the way they want, she's got the red group as well, which are very independent and there are quite specific groups within that class as well, so they'll take on a task and do it, and she'll be quite good at managing that particular aspect. So I mean the personality of the teachers will always come out in the way that...cause also the classes, teaching all four classes teaching them in the same room, the same teacher, the same stuff, I'm always amazed at how different the classes are anyway, like they'll walk in and you'll know that this activity is going to work very well on this group, and this activity is not going to work well with this group and you know, it's just personalities and other things.

Section 0, Paragraph 203, 1567 characters.

Ms Manor: They...they're working um...how much freedom do they have to work at their own pace...well I think their own pace always amuses me as a term. My concept of working at their own pace is that they are working on a specific task when they need to and there is fluidity within the classroom and that sort of thing. Other people always seem working at their own pace is leaving it to the last minute and then rushing away. There will be no scope for them to leave it to the last minute and then rush around, and what I tend to find, having done these integrated units a few times now, is that you spend your time with a whip, trying to get them sorted, and make sure that they all have it ready by period three-four on the 26th of October. Um, I think it's extremely important that they learn to be independent and that they're not, and that they don't slack around, like because they've all got specific jobs to do, like with the Noble sheet there where they have to tick off when they've completed everything, and so at the end of each day it's very important that you sit down, ok what have you done today? What are you going to do tonight? And what are you going to have done by the end of tomorrow? And give them a goal shoot, so that's something I haven't done yet, we did that in our French unit, where they had

their little goal sheet of what do you need to have done by the end of this week, and that sort of thing, so I think we might do something like that this time, I just haven't written it up yet. (laugh) But something like that is very important that...

Section 0, Paragraphs 213-218, 1363 characters.

Researcher: So pretty much up to them when they do what, but they've only got the two weeks to do it in...

Ms Manor: Exactly, and so there is the most important skill of how to manage your time, so what we've got to do as a teacher in a class, is have very clearly outlines in their minds, what they have to have achieved. Now the particular class that I've got has a tendency to go off and do their own thing, which is going to make them a bit...

Researcher: Will you give them, like you said you'd give them goal sheets where they can tick off what they've done for the day? Would it be better that they designed their own?

Ms Manor: That's what I've been (something) about it yet, because I've thought that that would probably be a better plan, so I'm not sure exactly how to go about doing that yet. Um, I guess ultimately at the beginning of the day when I said for the first time, I need to sit down with them as a class and right, 'What's everyone doing, what are you doing, what are you doing, what are you doing, what are you doing, what's your group doing, right what are we going to have done by then end of the day?' and get them to write down what they're going to have done, so they'll have their own goal sheets. And they're going to have to put in their (something) jobs, because I'm not going to have little bits of paper flying around everywhere.

Section 0, Paragraphs 220-222, 358 characters.

Researcher: (laugh) Just one for thought, what words do you anticipate you'll be able to use when asked to describe the students' conduct, character and behavioural manner throughout the unit?

Ms Manor: Focused, energetic...response full, I want them to be excited and happy, ah and co-operative. They're the main ones I guess, off the top of my head (laugh).

Section 0, Paragraphs 224-226, 368 characters.

Researcher: Ok, what about evaluation? Have you decided any criteria for evaluation of the unit?

Ms Manor: We talked about that as a team, and whether we want to evaluate it, we have the opportunity because we have specific tasks, so we can take those away, so for instance...um...there's, we're going to have an academy award at the end (laugh) for the best acting jobs...

Section 0, Paragraphs 246-250, 932 characters.

Ms Manor: No, no so I can't actually assess that specifically. So there, there's no actual assessment from these science teachers, but then the science component of it is sort of like a...skeleton work, something for them to hang off, it's not necessarily...

Researcher: You're assessing that content after the...

Ms Manor: Yes exactly, exactly, so I've got the test, I've got the test that was used, that was developed a couple of years ago that I've just used, um, because it's there, but I think it's about time that I changed it. So I think over the course of the next few weeks I'll think about how I'm going to change it. Um, there are specific questions about microscopes, fingerprints and things like that but I might just beef it up a bit. Put in a few things about, you know, what evidence could you collect for this particular scenario, what would it show and things like that. So I might put in a bit more of that analysis.

Section 0, Paragraphs 256-262, 1029 characters.

Researcher: What about feedback processes for yourselves as the teachers and also the students?

Ms Manor: Well, we've got the self-evaluation sheets that we used last time um, which the teachers all collected up and we had a read through of our own particular classes and then they all came to me and we also swapped and had a look at what other people's classes had written as well.

Researcher: So that's good feedback for you.

Ms Manor: Yes, and also because we wanted to make sure there was a positive experience because you know how competitive they can be and when they start working in groups there's this thing about, "I'm doing more work than anybody else" la la. Mind you, having said that this year's group weren't like that at all in the collaborative project, which I thought, was pretty impressive. When I consider that there were 56 groups and I had one group come to me and say, "Look, this person hasn't done anything," I thought that's pretty good. I'm not anticipating any real problems because of that.

Section 0, Paragraph 278, 1735 characters.

Ms Manor: I've changed it so that there is less requirement for them to complete the most important task, which was the writing of the story. I felt that that created too much conflict and changed the emphasis away from what I wanted it to do. Although having said that the story that we used was great and the trial we got out of it was great and the role-play that they did was great, but I just found the whole process to be extremely stressful for me as much as for them. It just set up an area of conflict that I don't think we needed to have. So hence, I did the story this time. So that was the main change. Because it took so long to write those stories, and generated so much marking as a result of it, we thought, "no". Too hard, so what we did was, I wrote a story; they are going to use that story so now it is more of a comprehension exercise. What we have been discussing over the course of the year is the lack of... Year seven's generally, it's not related to year sevens only because it is quite common in all year groups, is their inability to comprehend appropriately. So we had a new emphasis this year on comprehension. Read the question, what does it say, what do you have to do, what specifically are you required to do from this task? It actually worked quite well, I'm actually quite happy with the development of their skills in comprehension. So we've gone more to read it and extract rather than write it and go through the traumas of writing the story. Because we're taking out that huge component it's allowed us to do more of the integrated aspects. So now we've got time to do the survey, we've got time to do the mapping; they've got time to write their character profiles. So that's the biggest change.

Section 0, Paragraphs 280-282, 824 characters.

Researcher: Getting back to the relationship of the unit with the school, is there anything in particular at this school that makes it easier for you to run units such as these?

Ms Manor: The team, the general support of being able to do these types of things. A certain school that we won't name has a problem with students being taken out of their classes to do other things because it interferes with the teaching of that particular subject. Whereas we don't have, we've got a different philosophy here. I suppose the team members that I've got are so really great as well, so it's an attitudinal thing, not some structural thing. It's not that our timetable is better or anything like that, it's more that the people in the team and the school philosophy generally is very supportive of that particular way of teaching.

Section 0, Paragraph 286, 644 characters.

Ms Manor: Well it comes from Nicky who is the head of middle school; she believes that learning doesn't necessarily have to take place with the teacher standing at the front with a black board and a bunch of students sitting with a pen. She sees for instance, the collaborative project, which was a long drawn out process, lots of hard work and so on, but they weren't sitting around in the classroom. The things that they did and the things that they learnt as the end result were fantastic. So that's really and the boss, the principal, also sees that there is much more to the learning of a child than simply sitting in the classroom.

Section 0, Paragraphs 320-324, 2223 characters.

Ms Manor: No, actually I don't. I don't have a single reservation about it. I suppose we've had a bit of a practise run over the last couple of years. We've done a reasonable number of them; we've tried out different ways of doing it, and so on. As a result of that we've sort of worked out what works and what doesn't. I'm saying I have no reservations, as I am about to launch into this integrated unit. I think it is the best planned and organised, therefore fingers crossed, it should work best out of all the ones we've done. If this works really well, then we'll use that as our model, and we'll just use it again next year. We've changed the integrated unit for Forensics every single year. I'm hoping that this one will work and we will be able to use it over and over again and just tweak it here and there.

Researcher: Will you then use it as a basis for other things that you could do?

Ms Manor: Well, yeah, 'cause the one I want to do is an integrated thing with Earth Science and Social Science and I also want to do something for maths because I feel maths has been under, (pause), it hasn't been given the opportunities to do those sorts of things. And with Ms Shingles coming in next year I want her to have the opportunity to develop a unit that we could do. Because they've always tended to have English, the integrated forensics had that write a story and character profiles, we've also done a couple of bits and pieces here and there, they've all had a tendency to have that literacy aspect to it. I'd really like to have a numeracy one. So thinking with maths week next year, give Kim plenty of lead up time, when we have maths week if we could do something

like that, that would be good. That would be really good. Get them to do a problem-solving thing. If we do the collaborative thing again next year where the science worked really well, I was thinking it would be great to do the Math-O-Quest type thing. I'm not necessarily a big fan of Math-O-Quest but to do something like that would be really good. Just to give maths a bit of a leg up because literacy always gets a bit of a leg up around here. (Laughter). Not much happens for poor old maths, I would like to do a bit more of it.

Section 0, Paragraph 328, 150 characters.

Ms Manor: Well I'm thinking that next time, if we take on the maths as being our important underlying theme, then it will be English that is left out.

Section 0, Paragraphs 332-336, 976 characters.

And also, I'm thinking from a perspective, they only have four periods per cycle for each of their subjects, when we take the boys away for that amount of time it actually has a big impact on them getting through their programs. They've got a different philosophy to us, I'm sort of aware of that and they may not be that supportive. I know that Charlene was, Sean was and the head of middle school was but I am just not sure that there is that ground swell of support. So I'm quite happy not to do it next year.

Researcher: Do you think their emphasis is more on content?

Ms Manor: Mmmm. The only reason I say that is because we normally have the fun day this term coming up, and we go off and swim and play and have ice creams and all those sorts of things as a nice social event at the end of the year. But the Principal of has said that the students are not allowed to have any fun in fourth term, so I don't know what is going to happen with that.

Section 0, Paragraphs 338-340, 1285 characters.

Researcher: What do you think parent's reactions are to the integrated types of units?

Ms Manor: Ummmmm ... some of them are really supportive and they go, "That looks so much fun." The girls really get into it and they have a really good time. Some of them I think have a problem with group work, like, "My child works harder than anyone else" sort of thing and others go, "What are they learning in the two weeks?" They sort of see it as an interruption to their child's TEE results or something. Ummm, so you get a variety of reactions, but I sort of keep it as pretty low profile, they don't necessarily need the feedback. (Laughter). It's best to keep your head down sometimes rather than invite comment. I mean I didn't get any negative feedback apart from a couple of parents ringing me up and saying, "My child has done all this work and are they going to get marked on it?" We did get a few of those with the project for instance. "Is this going to reflect their grade?" I'm thinking, "Well how on earth do you expect me to mark it?" So you do get a little bit of that, that's just because they come from that traditional sort of ... you know if they don't do well in maths in year seven then God knows what will happen to them when they get out into the real world aspect.

Section 0, Paragraphs 342-344, 689 characters.

Researcher: Do you think students enjoy this style of learning?

Ms Manor: Yes they do. I think last year with some of the written parts some of them hated it. But because we've changed it specifically to cater better for them, I'd say that they will probably enjoy it more. I'm thinking of this group, the green group that I've got will probably really like it, because it gives them a bit more freedom and flexibility. They could also it's not as difficult as last year's was. It seemed like a good idea on paper, I think they will probably enjoy it more this time. We've done a couple of bits and pieces like this and they say they actually quite enjoy that opportunity to be creative.

Section 0, Paragraphs 350-360, 1989 characters.

Researcher: What is your understanding of integrated?

Ms Manor: Um, integrated, bringing together skills from different aspects of their learning. Say for instance, we have this integrated forensic unit, it's a forensic based unit but it's drawing in the skills and knowledge from all their subject areas and that includes drama, as well as the four main constructs. So that's basically my understanding of it.

Researcher: But in order to do that they still have to draw on the content knowledge of the different subjects.

Ms Manor: Oh yes, they do. It's bringing it together. Yes, it's drawing together all those aspects. So for instance we've done character profiles but if they want to they can go and see Ms Corr to get more advice. They've done surveys and graphing but if they need to they can come and see me. For SOSE, they've done a courtroom scene before but if they need to they can go and see their SOSE teacher.

Researcher: You seem to be developing the content first and then give them an integrated unit to do that will draw those contents together and give them the skills to use that content they've already learnt.

Ms Manor: Yes. What I've found at this school is that initially we did integrated units with learning how to do something, so it was all new. The emphasis was that they would learn how to do this through that particular unit. And I suppose my leanings are as a classroom teacher is that they don't learn it as well, don't learn as much and those sorts of things always make me feel quite anxious. So we have changed it so that instead of having an integrated unit to teach them something, we teach them something and us an integrated unit to expand on that or to consolidate it or to finish it off, to give them an end product for their work. Because otherwise what happens is that you teach a topic, forensics for instance, teach, teach, teach, teach, teach, give them a test and then start the next topic and there's no sort of party, celebration ...

Section 0, Paragraph 364, 276 characters.

Ms Manor: Yes, and that's what we wanted to do. We've learnt that if you want them to learn content then stick in the classroom and away you go, but if you want them to culminate, to extend, to expand from that then that's the best time to do your integrated unit, at the end.

Section 0, Paragraphs 376-380, 2159 characters.

Ms Manor: Yes, I know, and that's exactly what I was thinking. You'd have to teach like you were in primary school classes. If you went to a primary school teacher, like for instance one of my friends Ann does this kind of stuff, and said right, because she's just done some things on apartheid and racial intolerance, that sort of thing. Now because she teaches the one class all the time for all the subjects, she has much greater capacity to do those types of things. There is this level of what content are they learning? We keep coming back to what do they actually know by the end, and we assign that content to discipline boundaries. To teach it differently, to make it a truly integrated thing you'd have to teach it like it was a primary school class and I'm not sure you really can do it. I don't feel overly stressed teaching outside of my subject areas because I've done it, others might feel chilled to the bone. I know how hard it was teaching maths and that sort of feeling that I'm inadequate because I'm not really a maths person and what if someone discovers that I don't really know anything? It's quite intimidating because we do come from this culture of what content have they learnt. Can they name all the continents and the capital cities of Europe? I don't know that you could necessarily do it differently and I don't know if you would want to do it differently. Like are you doing it differently just for the sake of it? The whole point of going to a secondary school is so that you get a specific content knowledge.

Researcher: Why?

Ms Manor: I don't know, that was always the point. That was the point of doing it because at the end of it you've got those exams and to be perfectly honest I'm not necessarily sure I want to stir up senior school people any more than we already do. By our mere presence they'll hate us. You know, we dance around and they don't learn anything and when they get to year ten they have to learn things. It's an interesting way of looking at the world, but I don't necessarily want to stir them up any more. In senior school they learn things; down here they don't really learn anything. (Laughter).

Section 0, Paragraph 392, 1085 characters.

Ms Manor: My ideal curriculum would be one where you weren't under pressure from time, one which allowed students to gain knowledge in a variety of ways, where you could use that multi-intelligence type thing, which is something I really like about the new concept documents that are coming out. There is a lot of that in there which I am very excited about because I am working on the science advisory committee and getting all the snip-its about that. So something that would allow them to do that, something that would really allow them to immerse themselves in a topic, so rather than superficially doing it, because you've only got a limited amount of time, to actually immerse them in it, so we could do this integrated unit with much more going beyond the college walls. They actually had people come in but for them to go and see things and do things, that living the learning experience rather than simply learning about an experience that you may or may not ever come across. Something that would maximise their engagement, maximise the value and breadth of their experience.

Section 0, Paragraphs 394-400, 1741 characters.

Researcher: What do you think about the form of integration where you take a question and try to answer that question, so that you are not actually thinking in terms of disciplines, you are just trying to bring all of your knowledge together to answer that question?

Ms Manor: That takes an exceptionally skilled teacher.

Researcher: So you are actually thinking in terms of the teacher having to be the organiser.

Ms Manor: let's face it, we are adults, we can see the complexities of it, the depth and the extent of a question, whereas they are only kids who have a limited number of experiences. They don't know very much. Although they probably know a lot of things that we don't realise they know, there is still a limit to their capacity to do it. They still need to be directed. For instance, when I did the survey question, "Is crime a problem in our society?" you could just use that to draw in all sorts of things but at some point you are going to have to direct them to where to go, to what to do and how to look at the problem from a social studies perspective, from a science perspective, from this from that. Resources, I was talking to someone about this the other day, one of my friends who is a SOSE teacher, and she was talking about how she teaches the year ten unit and she does a lot of photocopying and the boss is getting into her about how much photocopying she does and she says but there are no resources. "I make all of the resources because there are no books." It has to be current and up to date and now and so that is where it becomes difficult. It is actually finding all of the support documentation and resources that you need to teach them what you want them to know. That's where it becomes difficult.

Section 0, Paragraph 408, 492 characters.

What it comes down to in the end is if you want to do a really good job of doing that sort of thing, you have to have the time and the resources to do it. I could whip up a really new, fantastic, integrated, problem solving unit but I'd only be able to teach one class and I would spend all of my time on that, and the learning experience would be fantastic but there is noway I can teach a full teaching load and do that. There's just noway you can do it. So this is our compromise position.

**Appendix J: A self-reflection sheet for Claire Beck**

Name: Claire Beck

Group: Green

# Self-Reflection

Now that you have finished the integrated unit for Forensics you need to spend some time thinking about the fortnight that was.

First - make a list of things that we/you did during this unit.

- Writing Questions
- How a trial goes

Put a circle around the ones you enjoyed the most

Read each question carefully and give it some thought before you fill it in

1. List the things that you have learnt while doing this Forensic Unit

I have learnt how a court case goes  
What jobs have what  
What sort of job the defence had

2. For each of the things you listed in Qu 1, which of your subjects helped you to do it? Put the subject's initials next to each one (eg M for maths, Sc, SOSE, I DT, TS etc)

SoSe  
Sc

3. What difficulties or problems did you have while doing this unit? List everything you can think of, even small things.

I found working with people hard because they were hard to get on with

4. What have you learnt from doing this unit? Are there benefits for you and your learning from doing this unit?

~~Yes~~ I don't know Not sure

5. What do you think your teachers' reasons were for developing this unit?

I don't know

6. Do you agree with your teachers' reasons? Explain why or why not.

Yes because they know better

7. Is this a good way of learning or not? Explain ways it has

- a) helped your learning

Yes

- b) not helped your learning

8. Were you able to understand all the written instructions or did you need to ask your teacher to explain what to do? NO Sometimes

Give examples of when this occurred

9. What could your teacher do to help you work on your own more?

I dont know

10. For each of your subjects listed below explain what your teacher would have wanted you to learn from this unit?

❖ English

❖ Maths

❖ Science

How we work together

❖ Studies of Society and Environment

11. Is doing a unit like this Integrated Forensic unit a good way of learning these things you listed in Qu 10?

Why? Why not?

Dont understand

12. Can you think of a better way to learn these things? Which way do you like to learn?

No

13. Have you learnt things that your teachers may not have thought of when they planned this unit? What were they?

No

14. Did you feel that you had control over **when** you did your work and **what** type of work that you did? Did your teacher need to keep you on task?

15. If you could do it all again identify **three** things (or more) you'd do differently.

Nothing

16. Rate yourself on the following scales by putting an X where you fit:  
e.g. Ms Manor loves B&B



Now you!

I took control of the tasks I was involved in I prefer to leave the responsibility to others



I completed all the tasks required of me I found it hard to finish the tasks given to me.



I enjoyed taking responsibility for my learning I did not enjoy taking responsibility for my learning.



I think that people can rely on me I don't think I am reliable



I like to work on my own I like to work with someone else.



I have enjoyed the integrated Forensic unit I have not enjoyed the integrated Forensic unit



Thank you! Love Ms Manor

**Appendix K: Self-reflection sheet for Anna**

Name: Anna

Group: Green

# Self-Reflection

Now that you have finished the integrated unit for Forensics you need to spend some time thinking about the fortnight that was.

First - make a list of things that we/you did during this unit.

- 1. I wrote LOADS of questions [E]
- 2. Help writing the script [E] [TS]
- 3. Got clothes together [DT]
- 4. Trial [SS]
- 5. Read the story [E] [SS]
- ~~6. Writing the~~

Put a circle around the ones you enjoyed the most

Read each question carefully and give it some thought before you fill it in

1. List the things that you have learnt while doing this Forensic Unit

- 1. How a court case works
- 2. How many questions a REAL lawyer have 2 write.
- 3. How hard it is.

2. For each of the things you listed in Qu 1, which of your subjects helped you to do it? Put the subject's initials next to each one (eg M for maths, Sc, SOSE, I DT, TS etc)

3. What difficulties or problems did you have while doing this unit? List everything you can think of, even small things.

<sup>of the</sup> ~~The~~ script got wiped.

4. What have you learnt <sup>about yourself from</sup> ~~from~~ doing this unit? Are there benefits for you and your learning from doing this unit?

Yes! I learnt that I was more patient than I thought

5. What do you think your teachers' reasons were for developing this unit?

To get us to really understand Forensics and how a court case works

6. Do you agree with your teachers' reasons? Explain why or why not.

Yes because they know better

7. Is this a good way of learning or not? Explain ways it has

a) helped your learning

· Really helped me understand Forensics

·

~~b) not helped your learning~~

8. Were you able to understand all the written instructions or did you need to ask your teacher to explain what to do? Sometimes I needed help

Give examples of when this occurred.

· Couldn't think of what 2 write  
· Got stuck on questions.

9. What could your teacher do to help you work on your own more?

Not help as much

10. For each of your subjects listed below explain what your teacher would have wanted you to learn from this unit?

❖ English

Grammar, Spelling

❖ Maths

Adding up, graphing.

❖ Science

the story

❖ Studies of Society and Environment

The whole case.

11. Is doing a unit like this Integrated Forensic unit a good way of learning these things you listed in Qu 10?

Why? Why not?

Yes because we are learning ~~the~~ what we are having fun

12. Can you think of a better way to learn these things? Which way do you like to learn?

I can't think of anything else  
I think it was a good way.

13. Have you learnt things that your teachers may not have thought of when they planned this unit? What were they?

Yes I think that I did. We got every finished. We did the court case on ti

14. Did you feel that you had control over **when** you did your work and **what** type of work that you did? Did your teacher need to keep you on task?

No. We did all our work. She only re- told us on the 2<sup>nd</sup> last day (Thurs)  
in a hurry.

15. If you could do it all again identify **three** things (or more) you'd do differently.

Work quicker

16. Rate yourself on the following scales by putting an X where you fit:  
e.g. Ms Manor loves B&B

I think Bold and the Beautiful is a great show.

I hate Bold and the Beautiful



Now you!

I took control of the tasks I was involved in

I prefer to leave the responsibility to others



I completed all the tasks required of me

I found it hard to finish the tasks given to me.



I enjoyed taking responsibility for my learning

I did not enjoy taking responsibility for my learning.



I think that people can rely on me

I don't think I am reliable



I like to work on my own

I like to work with someone else.



I have enjoyed the integrated Forensic unit

I have not enjoyed the integrated Forensic unit



Thank you! Love Ms Manor

**Appendix L: Self-reflection sheet for Annie Rush**

Name: Annie Rush

Group: Green group

# Self-Reflection

Now that you have finished the integrated unit for Forensics you need to spend some time thinking about the fortnight that was.

First - make a list of things that we/you did during this unit.

- Planning sheet
  - Newspaper article
  - Bring all evidence together in Snap lock bags
  - Character profile
  - Mapping exercise
  - Survey
  - Self reflection
- E  
\* E, TS.  
\* Sc  
E  
SOSE  
\* M  
E

Put a circle around the ones you enjoyed the most

Read each question carefully and give it some thought before you fill it in

1. List the things that you have learnt while doing this Forensic Unit

I have learnt how the court room is set up and all the positions  
I have learnt all the branches of Forensic science  
and what they mean. I have learnt how to show and  
investigate the evidence.

2. For each of the things you listed in Qu 1, which of your subjects helped you to do it? Put the subject's initials next to each one (eg M for maths, Sc, SOSE, E, DT, TS etc)

3. What difficulties or problems did you have while doing this unit? List everything you can think of, even small things.

I think I had a problem with the time limit. IT WAS TOO SHORT.

4. What have you learnt from doing this unit? Are there benefits for you and your learning from doing this unit?

Yes there is. On question no. 1 it shows everything that I have learnt. ~~From~~ Those are self explanatory.

5. What do you think your teachers' reasons were for developing this unit?

To conclude all of the core classes together, and so it would help us in yrs to come.

6. Do you agree with your teachers' reasons? Explain why or why not.

Yes I do. You learn more.

7. Is this a good way of learning or not? Explain ways it has

- a) helped your learning

It is a good experience because it was practical + you actually got to do things fun.

- b) not helped your learning

8. Were you able to understand all the written instructions or did you need to ask your teacher to explain what to do? yes I did

Give examples of when this occurred.

I needed help when we were on the mapping exercise it was abit difficult.

9. What could your teacher do to help you work on your own more?

nothing, we were given a time limit and we had to be responsible for our work.

10. For each of your subjects listed below explain what your teacher would have wanted you to learn from this unit?

❖ English = How to write the newspaper article, character profile (describing), Planning sheet.

❖ Maths = How to do the survey

❖ Science = EVIDENCE

❖ Studies of Society and Environment = Mapping exercise

11. Is doing a unit like this Integrated Forensic unit a good way of learning these things you listed in Qu 10?

Why? Why not?

Yes because it was fun

12. Can you think of a better way to learn these things? Which way do you like to learn?

This way, for a little change, once and a while.

13. Have you learnt things that your teachers may not have thought of when they planned this unit? What were they?

No!

14. Did you feel that you had control over **when** you did your work and **what** type of work that you did? Did your teacher need to keep you on task?

No the teacher (as I said in q<sup>n</sup> no. 9) didn't help us only when we had finished

15. If you could do it all again identify **three** things (or more) you'd do differently.

*Nothing*

16. Rate yourself on the following scales by putting an X where you fit:  
e.g. Ms Manor loves B&B

I think Bold and the Beautiful is a great show.

I hate Bold and the Beautiful



Now you!

I took control of the tasks I was involved in

I prefer to leave the responsibility to others



I completed all the tasks required of me

I found it hard to finish the tasks given to me.



I enjoyed taking responsibility for my learning

I did not enjoy taking responsibility for my learning.



I think that people can rely on me

I don't think I am reliable



I like to work on my own

I like to work with someone else.



I have enjoyed the integrated Forensic unit

I have not enjoyed the integrated Forensic unit



Thank you! Love Ms Manor

*Yvonne*

**Appendix M: The instructions given to the students  
for the mapping exercises in the Integrated Forensic  
Science Unit**

**These instructions were on the school intranet**

## Finding Your Destiny

*Trace the path that Aunt Mimi and Carrie followed as they made their way to meet Aunt Mimi's destiny. Let's begin:*

Aunt Mimi's apartment is located at grid reference E10. The northern windows have views towards the Perth CBD, and the western windows overlook Darley St and the Swami's apartment building. Place an X on the spot to show where their journey began.

The trio walked out of the foyer and crossed the street, heading north towards the bend in the road. Which street would they now be in?

---

This is where Melanie spots Swami Morishu - she heads off south towards which main thoroughfare? \_\_\_\_\_

### *BONUS POINTS*

*Which mode of public transport will take these two by the most direct route to the corner of William St and Mounts Bay Road? \_\_\_\_\_*

*Imagine it was you instead of Melanie. Explain how you completed this part of the journey if you arrive at Mill Point Rd at 10am?*

---

—

---

---

Back to Aunt Mimi and Carrie.....

They walked passed the shopping precinct called

---

before reaching the Esplanade. How will they get to Perth?

*BONUS POINTS*

*Which mode of public transport will take these two by the most direct route to their destination? \_\_\_\_\_*

*Where does it depart? \_\_\_\_\_ Arrive?*

---

*If they arrive at the departure point at 10 am when will they leave? \_\_\_\_\_*

*Exactly how long is the journey in time and distance?*

---

**This is where the note continues ..... Some of the Swami's writing is indecipherable. You may need to use the map, a newspaper and a white pages to identify the missing information.**

"Now that you are on the other side you need to head across the \_\_\_\_\_  
\_\_\_\_\_ Gardens towards the Conservatory, shaped like one of the eight wonders of the world. If you walk up the hill you will see the Australian Stock Exchange, found in \_\_\_\_\_ Ct, and two holy sites, one of which Reverend Marie

---

Wilson now ministers, next to Trinity Arcade. (Her name should be on the board outside.)

Head down St George's Terrace to King St (Grid Reference Number \_\_\_\_\_). At number 141, level 10 SGT is an office that the trio visit later in the story. Can you guess what it is? \_\_\_\_\_).

As you travel north you will see to your left an historic building filled with great drama and excitement, which is currently featuring \_\_\_\_\_.

Continue to Wellington St, named after the famous English Duke, and enter the Arts Precinct. Walk through this area and admire the M \_\_\_\_\_, the Art G \_\_\_\_\_, P \_\_\_\_\_ and the \_\_\_\_\_ Library, before you emerge in Francis St outside the educational institution, the \_\_\_\_\_ TAFE. Travel back towards the east where the sun rises over the Darling Scarp, until you reach Beaufort St. Go the only way the traffic is permitted to travel. Once you reach Birdwood Square rest under the beautiful elm trees before discovering your true destiny, at the Eff \_\_\_\_\_, which is on the road that forms the hypotenuse of a triangle. ending at Bulwer St."

**Appendix N: First page of questions written by  
Anna, the Prosecution Counsellor, for the Integrated  
Forensic Science Unit**

## DNA / Fingerprinting

- 1) Please state your name, address and occupation for the court ✓
- 2) How long have you worked in the area of fingerprinting?
- 3) Taking into consideration the ~~years~~ years you have worked on fingerprinting, do you consider yourself to be an expert in the study of fingerprinting?
- 4) Were you given the following pieces of evidence to test for fingerprints:
  - a) Aunt Mimi's Diary
  - b) The mirror from Aunt Mimi's Apartment
  - c) The answering machine from Aunt Mimi's Apartment
- 5) Other than Aunt Mimi's fingerprints did you find any other fingerprints on the items just mentioned?
- 6) Did you receive a example of Lisa Posley's fingerprints?
- 7) Were the <sup>other</sup> fingerprints that you found on
  - a) Aunt Mimi's Diary, The mirror from Aunt Mimi's ~~Apartment~~ Apartment and the answering machine the same as Lisa Posley?
- 8) Because Lisa Posley's fingerprints were on all of these items and they all come from Aunt Mimi's apartment, do you think it is likely that Lisa Posley was in Aunt Mimi's apartment?
- 9) Did you examine this brush for fingerprints?
- 10) Can you tell the jury where this brush came from?
- 11) Whose fingerprints were on the brush? (Henry Posley)

**Appendix O: First two pages from the booklet used  
in the discipline-based unit, Above Our Heads**

## Above Our Heads

### Overarching Statement

(No.5) Students describe and reason about patterns, structures and relationships in order to understand, interpret, justify and make predictions.

Outcomes to be assessed:

### Investigating Scientifically

#### IS 4.1

The student identifies the variables to be changed, the variable to be measured and at least one variable to be controlled, or, in a descriptive study, plans for the types of observations that need to be made.

This will be evident when students, for example:

- plan specifying the two main variables (independent and dependent)
- plan to keep at least one variable the same
- say how they will collect data for the independent and dependent variables
- select an appropriate data collection procedure.

#### IS 4.2

The student takes care with data collection so that data are accurate; uses repeated trials or replicates; and uses independent variables that are usually continuous.

This will be evident when students, for example:

- use equipment appropriately and consistently
- measure accurately to one scale division
- make more than one measurement for each treatment
- recognise the need for safety precautions, such as safety glasses.

#### IS 4.3

The student calculates averages from repeated trials or replicates; plots data as line graphs where appropriate; and makes conclusions which summarise and explain patterns in the data.

This will be evident when students, for example:

- calculate averages from repeat trials or replicates
- sum data over intervals, such as daily rainfall over a month
- plot discrete data for independent variables as bar graphs and continuous data as line graphs
- summarise the data and attempt to explain the patterns and/or relationships between the variables.

#### IS 4.4

The student makes general suggestions for improving the investigation.

This will be evident when students, for example:

- say that better equipment was needed to do the experiment properly
- say that measurements need to be more exact
- say that the testing needs to be repeated more times.

### Earth & Beyond

#### EB 4

The student understands processes that can help explain and predict interactions and changes in physical systems and environments.

This will be evident when students, for example:

- compare and contrast asteroids, comets and meteors in terms of size and frequency
- identify similarities and differences between the inner and outer planets.

### Communicating Scientifically

Students communicate scientific understanding to different audiences for a range of purposes.

### Science In Daily Life

Students select and apply scientific knowledge, skills and understandings across a range of contexts in daily life.

### Acting Responsibly

Students make decisions that include ethical consideration of the impact of the processes and likely products of science on people and the environment.

### Science In Society

Students understand the nature of science as a human activity.



## Activity 1 - Introduction



Have you ever wanted to fly? Chances are you have. Think about the times when you've wished you could rise above the surface of the Earth. What reasons did you have for wanting to go "above your head"?

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---

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---

Humans have wanted to climb high into the sky for centuries. This topic will help you to explore some of the ways in which humans have moved into the space **ABOVE OUR HEADS.**

You will be doing quite a lot of experimenting in this topic. The main areas of working scientifically that you need to develop, are:

1. *Identifying the **variables** to be changed in an experiment, the variable to be measured and at least one variable to be controlled.*
2. *Taking care with **data collection** so that your data are accurate and using repeated **trials** or replicates to improve the reliability of your results.*
3. *Calculating **averages** from repeated trials or replicates and plotting data as line graphs where appropriate. Making conclusions which **summarise and explain patterns in your data.***
4. *Making general suggestions for **improving your investigations.***

These are the activities that you will be completing in this topic. You might not be doing them in this order;

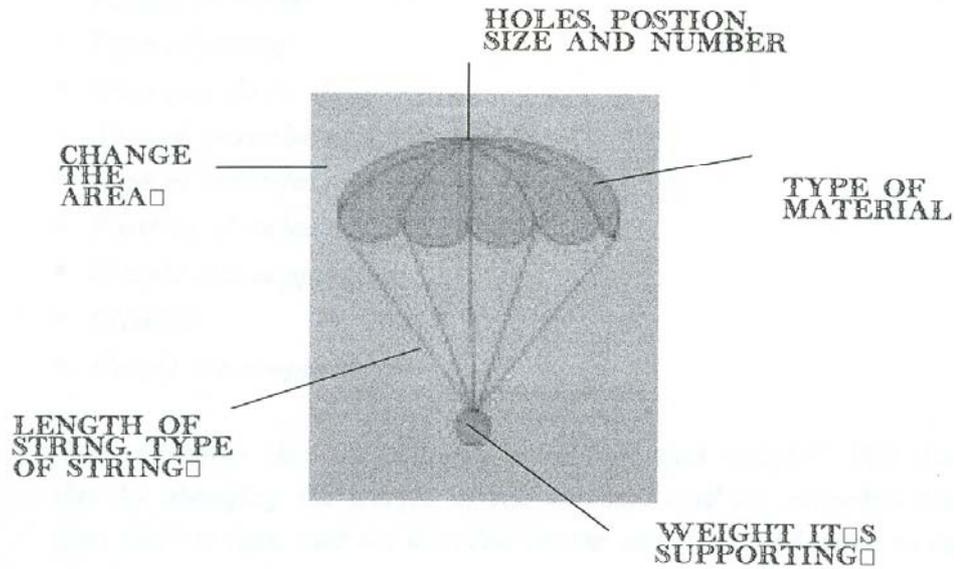
- ❖ Gravity sucks!
- ❖ Is Air A Real Substance?
- ❖ Parachute Problems (Assessment)
- ❖ What Is The Effect Of Heat On Air?
- ❖ Balloons - Just A Load Of Hot Air? (Assessment)
- ❖ Air Streams & Mr Bernoulli
- ❖ Aerodynamics
- ❖ The Great Dart Championship (Assessment)
- ❖

Optional: Out'a Space (if we don't run out'a time)



**Appendix P: Annie Rush's report: Rate of descent  
of a parachute**

# PARACHUTE!



**Aim:**

*We wish to investigate the effect of changing the weight of the washer has on the speed of the parachute.s decent.*

**Hypothesis:**

*Our hypathesis is that we think that if we put a heavier washer on it will fall down more quickly, If we put a smaller washer on it. it will be more steady and slow, This is because the weight of the item the parachute is holding the quicker and slower the parachutes will descend.*

**Variables:**

---

- *Size of holes*
- *Length of string*
- *Type of string*
- *Way you throw it*
- *Size of parachute*
- *Type of materials*
- *Position of holes*
- *Weight it's supporting*
- *Climate*
- *Height it's dropped from*

*The variables that we changed were time and weight! We did this by changing the weight of the washers and we recorded the time that it took, and we decided on the one we would want to be on the most.*

***Equipment:***

- *Our parachute: made up of plastic bag string and different washers.*
- *A plastic washer*
- *A small washer*
- *A big washer.*

***Method:***

*We will go to the top floor and have 3 trails for each washer and then record the results.*

***Table of Results:***

\_\_\_\_\_ *Time of Fall*

Trails	Trail 1	Trail 2	Trail 3	Total	Average
W1	5.93	7.09	4.91	17.91	5.1
W2	3.19	2.19	3.53	9.63	3.2
W3	5.09	4.19	5.25	15.25	5.1

*Weight of each object*

---

*Weight 1: 13.34g*

*Weight 2: 3.01g*

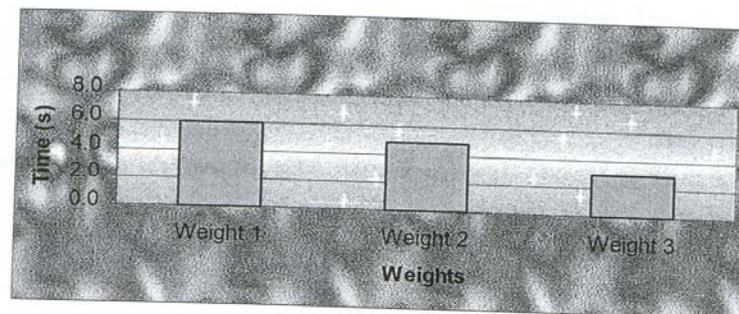
*Weight 3: 1.28g*

*Conclusion:*

*We proved our hypothesis correct because as the weight of the washers became heavier (because of the different washers) the speed increased and made descent of the parachute faster. We also found that the lighter the weight the slower the parachute fell. We thought that parachute number 3 was the best parachute to travel in. We thought this because it gave a slow and steady ride. It might be because of the weight of the washer. You can see the difference on the chart below.*

*Graph of results:*

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## Appendix Q: Interview quotes from Nvivo used to analyse the regulative discourse

### The School and its Principal (F<sup>++</sup>)

59: Ms Felix: Fairly definite and probably once in place that's the way it goes, (pause) I don't know. I am actually under the impression that there is a fair bit of discussion that goes on before decisions are made by people that are caring people and people that are fairly balanced too, you know they are keeping in mind the families, students and staff, staff who don't want it to consume their life, whereas for a lot of staff it is their life, the school. (Interview with Ms Felix, 26-11-01)

103: Principal: (Laugh) Um, whether it fits in with the model, I like the school to be seen as a, that it has a caring sort of quality about it, that that's seen as a strong focus within the school. What I mean by caring, compassionate school is that it takes on a responsibility in not just educating the student academically but is engaged in all the other qualities in the development of the young child so that it is caring, it's compassionate, the teachers have humanity and humility, self-esteem, confidence, um I'd also like to see the school recognised that it's innovative, it encourages staff to be risk takers, um it's progressive, um it's .....community, that it encourages parent participation, staff participation and that it has a community feel about it. Um ..... (Interview with the Principal, 11-10-01)

163: Ms Corr: They do. Actually I remember saying when I first started that I felt very uncomfortable with the way no one really knew what I was doing, not even my head of department, and a friend of mine was saying, "Well, turn that around and say they obviously trust you." At that point in my teaching career though I wanted more. (Interview with Ms Corr, 26-11-01)

111: Ms Corr: (Laughter.) I think um, autocratic, um, can I give you phrases? This is going to sound very harsh, the pretence of being democratic, um, quite inflexible, but once again giving the impression that they are being flexible, um, very much um, (pause) not also quite apparently um not slapstick but um, just that I don't sometimes think that, I think sometimes ideas are grabbed on and acted on without really true consideration of implications for the teaching and the learning in the school, that's what I think. (Interview with Ms Corr, 26-11-01)

85: Ms Barter: Well I've got here aggressive. I've thought about it and that's the feedback I get because we get quite a lot of aggressive responses from other schools, so I think they see us as a competitive school, as highly successful in competition, and also too possibly it ramifies into the community beyond us. For example, I took a group of girls out on a survey and I got quite aggressive responses from people that we met. We simply said, "Hello, we are doing a survey of the area." One girl actually threw something at us, a girl from Collie, she would have been about year five, and her mother was with her and did not restrain her in any way. When the girls, under my supervision, continued to address her and say we were just doing a survey they closed the door in our face. That was just up here beyond the school. Also other people in the suburbs I think are a little bit fearsome of what we stand for. (Interview with Ms Barter, 4-12-01)

101: Ms Barter: Um, I've got here pre-ordained! (Short laugh heard.) (Interview with Ms Barter, 4-12-01)

56: Mrs Rush: I'm really stuck now. I suppose they're caring. I'm going to feel really bad and not be able to think of a single one. To describe The College? (Parent Interview with Mrs Rush, 13-12-01)

76: Mrs Vince: Mmm, that's a hard one. It's pretty caring, a pretty sharing, caring sort of place. Um, high achievement, it's a high achievers' school, um, which isn't always good. Other words to describe it that come to mind? Um, (A long pause.) It's a religious school; it's a very nice school in terms of the buildings, the environment that they are all studying in. Wide variety of things that are offered, good teachers. (Parent Interview with Mrs Vince, 28-11-01)

122: Mrs Stammer: Um, caring, um, have a very family atmosphere, um; well it's a lovely school ... (Parent Interview with Mrs Stammer, 7-12-01)

### **Parents (F<sup>+</sup>)**

145: Ms Barter: The parents, in amongst the cool group, are victims as well as perpetrators. Several parents I can think of allow this to happen because they are willing favour from their children. They are on a guilt trip I believe because they feel as though they have let them down, or the marriage has broken down, or their has been trouble in the family so they try and compensate by allowing their children to have these amazing parties and it goes on non stop. It alienates so many people, these children are 11 and 12 years of age we are talking about and I am sure it continues to go up the ladder. (Interview with Ms Barter, 4-12-01)

197: Ms Barter: The ones who are perhaps a bit of a thorn in our side have their own philosophy and they'll come to school and they'll take every advantage plus to contact the teacher over and over and over again because once again they feel some degree of guilt about their parenting role and they want to put it upon the teacher. I can think of many parents who have certainly done that. What's another sort of parent, a parent who really is too busy to be involved with the school at all but expects you to do all of what they should be doing? At the end of a term or the end of a semester or the end of a year they suddenly say, "I haven't seen this diary before, why hasn't it been signed by the teacher, why hasn't it been sent home, why hasn't anyone rung me up?" And see often the case is, the parent will be informed that there is no longer a diary and she'll need to get another one, or the diary needs to be signed or there is something in the diary right now that you need to sign, but she or he is too busy to receive that note and the child has got such a very busy out of school curriculum that the parents have the attitude that the school will take care of itself. The school takes care of that part of it; I've got this part of it. Other parents again take absolutely no notice of their children, of what they are doing, as long as they are happy, and at the end of the year they think, "Oh dear, we had better have a look at this because your results are not very good." Contact has been made, there is always contact made via telephone, email if we have the address, via the child's diary if that's reliable enough, if not the other avenues are taken. So I don't know if that covers that. (Interview with Ms Barter, 4-12-01)

229: Mrs Rush: I think I got a perfectly good education, so did Mr Rush, and it's done us fine. A lot of kids who are coming out today like a graduate, Mr Rush reckons they're useless, they couldn't write a letter, they can't do half of the stuff that he used to be able to do. They are so dependent on computers and everything else, so no I don't, I think they actually need the basic old-fashioned way of being taught It's like in junior school they need to be taught how to spell, they need to learn their tables. (Parent Interview with Mrs Rush, 13-12-01)

131: Ms Corr: Well the first word that came to mind was demanding, but I don't mean that in a negative way, I would mean very much involved, demanding in terms of taking up a lot of time and wanting to know a lot about their kids and knowing everything. I can talk to a parent and refer to an assignment and she'll go, "Oh that's the one on this or that."

132:

133: Researcher: What about Dads?

134:

135: Ms Corr: Oh yeah, that's quite interesting, I speak very rarely with the fathers, so I would say the Mums generally in my experience are very hands on, the Dads tend to be there, I know that they are there but more supporting the mothers. But yeah, demanding seems to be the main word just in wanting information about their children. (Interview with Ms Corr, 26-11-01)

75: Ms Felix: There are parents that are very interested in their children's progress, is that what you mean? And there are parents that you will never hear from, but they are probably trusting the school. I think there are parents who voice their concern, and they need to be heard. I've got to admit it would be nice to get more positive feedback from parents, I don't think you get a lot of that, that's our society. I think parents are busy, most parents are working, I don't know what percentage but there is quite a, you know, to put a child through here requires quite a lot of money, certainly a segment where the mother doesn't have to work but I think generally a lot work. (Interview with Ms Felix, 26-11-01)

96: Ms Manor: Asking me that this year, my response will be very different to what it would have been last year. I think that the parents of this particular year group are extremely supportive, very understanding of the amount of things that we do ... (Interview with Ms Manor, 7-12-01)

### **Teachers (F')**

115: Ms Corr: I find there's a real division, generally. I think on the one hand I would use words like laidback, friendly, um and then on the other hand you've got the highly stressed, critical, political kind of staff. Generally I would say very professional, (long pause) yeah.

125: Researcher: You mentioned risk takers; would you apply that to the staff?

126:

127: Ms Corr: Not generally. Um, I think just from my friends on staff, there're a lot of people who are or who want to be, but they are just pulling their heads in and playing it safe, which is a little bit sad. (Interview with Ms Corr, 26-11-01)

147: Ms Corr: Yes, that's true. I still think most people are switched on. The maths department was saying the other day, they were asked, "When am I ever going to need this?" and they admitted, "Well actually you don't but the skills that you need in order to complete this mathematical exercise is what's going to be valuable later on in life." I like to think most people are switched on to that, but maybe not. (Interview with Ms Corr, 26-11-01)

7: Ms Barter: Mmm, also to the choices that students are making, will determine what resources are being used. There are a lot of staff members who are at the moment feeling very threatened because the students are not making choices in that area. I noted that some staff members are even marketing themselves privately to their students, promoting their subjects and what they can do over say somebody else's subjects. (Interview with Ms Barter, 4-12-01)

113: Ms Barter: I find the staff are very dedicated, hard working, I think there is a lot of talent ... (Interview with Ms Barter, 4-12-01)

73: Annie: Um, I like all the teachers and my friends. And I like all the, how they try to involve you. (Student interview with Annie Rush, 19-11-01)

88: Ms Manor: Extremely committed, very dedicated, very professional, caring, altruistic, hard working and certainly, I mean that's the key thing, they do work very hard here, but also very supportive of each other, within like, particularly the team, very supportive, and a lot of people that I work with like form teachers and things like that, they're all very supportive. I think they are good if you give, they give back. As long as you get that idea of, "We're a team and we're working together towards a goal, then they're actually quite good. (Interview with Ms Manor, 7-12-01)

112: Ms Manor: I think again it's that supportiveness. (Interview with Ms Manor, 7-12-01)

58: Mrs Rush: Well yes, they're definitely caring, aren't they? (Gives a short laugh.) They um, communicate well ... (Parent Interview with Mrs Rush, 13-12-01)

86: Mrs Stone: (A long pause.) Mmm, (an even longer pause.) very capable, I think, they're enthusiastic, at least the ones that I have had dealings with. (Parent Interview with Mrs Stone, 27-11-01)

170: Mrs Smart: Definitely happy in their jobs and they all seem to say they love working at The College. Um, which if the teachers are happy in their work then it rubs off on the students, so it's a very happy atmosphere, ... um ... (Parent Interview with Mrs Smart, 28-11-01)

78: Mrs Vince: I've always found them to be progressive, they're fairly progressive teachers, I think that they've taken an interest in the girls, there's always exceptions, the girls have always enjoyed the teachers that they have had. In Katie's case I think innovative too, the teachers come up with some new and novel ways of doing things. Um, professional, they're very professional teachers. I think the way they deal with things is good, I think that they um, and they seem to, there are some exceptions but they seem to coordinate well. I think that they seem to coordinate with each other. There are exceptions but um. (Parent Interview with Mrs Vince, 28-11-01)

126: Mrs Stammer: The same aren't they? Caring, I feel that they really worry about how the children are going. I just think they're all lovely people. (Parent Interview with Mrs Stammer, 7-12-01)

63: Ms Felix: I think the staff is committed, fairly professional in their area. I think sometimes there is a bit of a grizzle about things but generally everyone's pulling their weight and probably wouldn't not pull their weight because of the effect on the school and also because of their peers, they see the commitment of their peers. (Interview with Ms Felix, 26-11-01)

111: Principal: Yeah, that would be risk takers, um .... The majority would have a generosity of spirit to go that extra mile, that's often you know what parents want to see put in practise you don't just you know talk it, you walk the talk as such and you, again you hope staff will help out at lunchtime or co-curricular activity and so that they're giving that what I call generosity of spirit and that the girls actually see that um .... Hard working, professional ah.. risk takers I may have covered that um .. that's probably sort of summing them up. .... Teamwork I guess from my mention of the point of view is I'm encouraging each team to be working well so if they're working well the bigger team, the school, is working well. Um .. now that's the responsibility of your middle managers and so you've got to rely a lot on them so in terms of talking about you know the mass of staff that you .....the gift I guess of empowering and delegating responsibility is an important part that the staff see that they're given that chance to, for leadership roles within the school as well um creating um .. you want to keep good staff ah.. and so you create leadership opportunities within the school so that they're extended, they're challenged in their role and hopefully they do come to school wanting to work. (Interview with the Principal, 11-10-01)

### **Students (F)**

119: Ms Corr: Words to describe the students. Oh dear, I heard this time and time again before I came to The College but it is so true, I would say very motivated, very independent, I think, independent learners, um, but also independent just in not always requiring assurance from older people. I think sort of risk takers in a way, um, do you mean in their learning or overall?

120:

121: Researcher: Overall.

122:

123: Ms Corr: But having said that there is a large group here that are quite needy, there are two sides to the students. Very um, confident, this is generally, um quite self-centred sometimes ... (Interview with Ms Corr, 26-11-01)

211: Ms Corr: A couple of girls just became the leaders and organised the rest of the class. But I had a lot of girls wandering around going, "I don't know what to do?" And I'd say, "Have you done this or that and go and look at this or that", but um, just no sense of taking the initiative I suppose. (Interview with Ms Corr, 26-11-01)

447: Ms Corr: Exactly, I find they don't really have a, which is kind of good, I find that this years year sevens don't work for marks, they are not geared towards getting marks, which is kind of how we always wanted it but at the same time you want them to be geared for learning and I can't see that happening either. You don't want them to be working towards an "A", just the "A" for the sake of it, the girls don't really respond to the levels, the "VH", "V", "S" etc. (Interview with Ms Corr, 26-11-01)

491: Ms Corr: Yes, they call the middle school "middle fluff". I can see it from their point of view, when you're not involved and you look at it, they do look kind of out of control. Exuberance and motivation can be interpreted differently. (Interview with Ms Corr, 26-11-01)

92: Ms Manor: Um, students? Well, they're adolescents, so they're not perfect and I don't expect them to be perfect. I think that they are enthusiastic, committed to do what's best for them. What's best for them is not necessarily what we consider is best for them, but they are very committed to that and if you can align your goals and their goals there is really no end to what you can achieve with them. Um, year seven's particularly are extremely enthusiastic. But they're also particularly at this school, you can't bullshit them. They know when you're just doing it for the sake of it, and they're very questioning. They're very good at sifting through what's important and what isn't because they're trying to maximise their enjoyment in learning and we are getting much better at it. (Interview with Ms Manor, 7-12-01)

222: K. House: Focused, energetic...response full, I want them to be excited and happy, ah and co-operative. (Interview with Ms Manor, 12-10-01)

322: Ms Manor: Writing is still perceived by students as a hassle. They hate it because it's work. If you ask a student, "What is work?" to them it's writing. And even using a laptop, where it is as simple as you can get, I must admit that they do write pretty well with their laptops, but it is still this idea that it is work. If you were to ask a teacher, "What is the primary thing you want the kids to be able to do?" it's to write. That's kids and we've got to learn that we are teaching kids, not adults. (Interview with Ms Manor, 7-12-01)

62: Mrs Rush: You have, very diverse. I mean, it's unbelievable to think they all come from supposedly good homes, what goes on is unbelievable. In my opinion, but maybe it's just that I know a bit about it. (Parent Interview with Mrs Rush, 13-12-01)

72: Mrs Rush: I think some of these girls are very highly strung, slightly on the wild side and I don't know if they are trying to prove a point or what they are trying to do. I mean, they've been given a good opportunity but in my opinion a lot of them are wasting it. Completely wasting it. I mean um, they're not trying. A couple of Emma's friends from last year have gone completely off the rails. And it is even starting to show in year seven. You can pick the kids who are going to be trouble by the time they are in year ten. There's the kids that want to learn and the kids that don't. They don't know why they're there some of them. The parents must be wasting money. (Parent Interview with Mrs Rush, 13-12-01)

82: Mrs Stone: Happy, chatty, enthusiastic. (Parent Interview with Mrs Stone, 27-11-01)

86: Mrs Vince: All right. Well, at the junior school I think the girls are very um, they're very caring, they're very confident, that's probably right across the board, perhaps less so in senior school. They're confident girls, I find whenever I go up there I find that they are very forthright. They're very caring, because I've got the little one, whenever I go up there they're asking how Lilly is, they seem to take an interest, they're just quite vital children. There are issues with the social aspect, I think that being all girls there's always a bit of nastiness that can happen that goes against the grain of the caring. I mean that happens in boys' schools too, I went to school in a boys' school, I always thought that boys weren't bitchy but I've learnt that that isn't so true. Amy's year, middle school, same sort of thing, I'd have the same sort of comments. Yeah I think basically and as you go through the senior school, they're still very caring but there's competition, there's quite a bit of competition. (Parent Interview with Mrs Vince, 28-11-01)

67: Ms Felix: Happy, enjoying what's offered here, involved, ...

68:

69: Researcher: What about in terms of their schoolwork?

70:

71: Ms Felix: Whether they are doing it or not? I think there's quite a bit of competitiveness, the standard they see their peers working at and you will always get a group in any year group who are driven and you'll always get a group of very slack and fighting it all the time, doing as little as possible. (Interview with Ms Felix, 26-11-01)

125: Ms Barter: Individually you take the students and you find some nice young women, as a group of young adolescents, I find them extremely disrespectful, rude, disparaging remarks about others, bullying. If you take them individually you find more of the real person, but when they are in their groups it's Pac mentality. (Interview with Ms Barter, 4-12-01)

## **Appendix R: Theoretical framework used to help analyse framing issues categorised as The Criteria of Knowledge within the instructional discourse**

The following criteria of knowledge are taken from the book; *Women's Ways of Knowing: The development of self, voice and mind* by Mary Field Belenky, Blythe McVicker Clinchy, Nancy Rule Goldberger and Jill Mattuck Tarule. Published by BasicBooks in 1986 and again in 1997, New York. It is from Appendix B, *Educational Dialectics*, page 237-238. In this book the Criteria of Knowledge are referred to as Educational Dialectics.

6. Process Oriented (means) versus Goal Oriented (ends). What are the aims of education?
7. Discovery (constructed knowledge) versus Didacticism (received knowledge). How is knowledge viewed? How is the act of becoming a “knower” explained?
8. Discrete (compartmentalised, strong boundaries) versus Related (synthesis). What is the relationship between learning and “life”?
9. Being with others (collaborative, cooperative) versus Being alone or on one's own (solitary, competitive). What arrangements for learning are preferred? Have been experienced?
10. Rational (logical, analytical, objective) versus Intuitive (gut feeling, subjective, ESP). What method(s) are used for analysis? What method(s) are valued?
11. Breadth (generalist, dilettantism) versus Concentration (specialist, narrowness, blinders). What is the range of interests in learning?
12. Support versus Challenge. What are the optimal conditions for learning? Who and what are experienced as supportive/nonsupportive? Challenging/nonchallenging?
13. Personal versus Impersonal. What is the relationship between self and the content of one's learning? How are these relationships structured in terms of the curriculum, relationship with peers, relationship with faculty and staff?

14. Self-Concern versus Responsibility and Caring for Others. Is concern for self vs. concern for others an issue in educational decision-making?
15. Inner versus Outer. What factors control goal setting, pacing, decision-making, and evaluation? Who and what is experienced as validating/nonvalidating? I understand Outer to be determined by the cultural or social base and Inner to be a reflection of this but modified within the experiences of the person involved.  

(The Selection, Sequencing and Pacing of the work can be equated to the category of 'Ways of Knowing' referred to as Inner, as contrasted with Outer Knowledge. Factors that control the development of Inner and Outer Knowledge are things such as selection, sequencing and pacing and the question of who or what validates these choices.)
16. Listening versus Speaking. This is an indicator of time for reflection on experiences. What are the experiences of voice?

## Appendix S: An example of a narrative written about the trial used to analyse the data

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Project: Analysis of Transcriptions User:  
Administrator Date: 21/11/2003 - 10:02:15 AM  
DOCUMENT TEXT REPORT

Document: 2 Narrative of the Trial 26-10-01  
Created: 14/11/2003 - 5:04:24 PM  
Modified: 21/11/2003 - 10:02:07 AM  
Description:

The Trial

Document Text:

1: The Trial  
2:  
3: This is not a transcription of the trial, as it was, but rather a conglomeration of  
4: excerpts and notes taken during the observation period of the actual performance of  
5: the trial. The trial commenced after the team meeting, straight after recess, and the  
6: teachers had been briefed as to the completion of the reflective sheets and when they  
7: were all to meet together in the learning centre to give out awards to the girls they felt  
8: worked the best during the two-week period. Although not recorded I have extensive  
9: notes on the deliberation period by the jurors and feel that this gives an indication of  
10: how the girls were thinking and what they had learnt from the experience. The girls  
11: actually spent all of their recess time getting into character and going over their roles  
12: in order to be well prepared.  
13:  
14: The trial largely proceeded according to the script but some girls added in their own  
15: parts and so I will transcribe those parts that are indicative of individual contribution.  
16:  
17: Anna, the Crown Prosecutor, had written most of the script for the trial and it  
18: was her reasoning that was of interest in the following excerpt. She is a clever girl and  
19: finds writing and communicating quite simple but is not a dramatic performer and  
20: tends to pull back on her performance possibly due to nerves. The witness,  
21: Jane, is also a capable student who can write well and she wrote all of her  
22: own responses in collaboration with the Crown Prosecutor. She did however remain  
23: in character throughout the trial and did a convincing job of responding to the  
24: questioning. Her responses and voice inflections led me to believe that she understood  
25: the implications behind what was said.  
26:  
27: Crown Prosecutor: "Your Honour, the crown intends to prove that  
28: Henry Posley is guilty of attempting to defraud Mimi Rhinehart of 3  
29: million dollars. The accused tricked Mrs Rhinehart into thinking that it

30: was her destiny to marry him and as a result she agreed to finance the  
31: play, The Marigold Prophecy, something she would never have  
32: considered otherwise. My first witness is the fingerprint expert, Mr  
33: Anthony Robinson."  
34:  
35: Crown Prosecutor: "The court calls Dr Anthony Robertson." [The  
36: court attendant pronounced the expert's name incorrectly even though it  
37: was written down and had been correctly stated. It is also the girl's actual  
38: surname.]  
39:  
40: The witness is sworn in and asked to state his name, address and  
41: occupation.  
42:  
43: Witness: "My name is Doctor Anthony Robinson and I'm an expert in  
44: fingerprints." [When choosing her character profile, Jane had fun  
45: and was not bothered by gender stereotyping but rather decided to make  
46: fun of the stereotyping of a revered scientist being older, unkempt,  
47: forgetful with lab coat, glasses, a pot belly and very much masculine. She  
48: stayed in character very well.]  
49:  
50: Crown Prosecutor: "How long have you studied fingerprints for?"  
51:  
52: Witness: "Twelve years."  
53:  
54: Crown Prosecutor: "For the benefit of the jury the crown wishes to  
55: first offer three sets of fingerprints. The fingerprints belonging to Swami  
56: Morishu obtained from his hairbrush and the fingerprints of Henry  
57: Posley. We also wish to offer a hair brush as exhibit A, which we will  
58: prove has the fingerprints of Henry Posley on it. [Passed evidence to front  
59: bench and witness.] Whose fingerprints are on the hair brush from the  
60: thrown out rubbish of 53 Darley St, South Perth?"  
61:  
62: Witness: "Henry Posley's."  
63:  
64: Crown Prosecutor: "Can you definitely tell me that these two sets of  
65: fingerprints belong to Henry Posley?"  
66:  
67: Witness: "Yes, they both are the same fingerprints."  
68:  
69: Crown Prosecutor: "So Swami Morishu and the accused have the  
70: same fingerprints?"  
71:  
72: Witness: "Yes, this makes them the same person."

73:  
74: Crown Prosecutor: "We would like to offer another set of  
75: fingerprints, these belong to Mrs Lisa Posley, a mirror, answering  
76: machine and a diary." [Evidence is passed to the front bench and then to  
77: the witness.] "Firstly, where was this mirror found?"  
78:  
79: Witness: "In Mrs Rhinehart's apartment."  
80:  
81: Crown Prosecutor: "Whose fingerprints are on this mirror?"  
82:  
83: Witness: "Mrs Lisa Posley's."  
84:  
85: Crown Prosecutor: "Where else did you find these fingerprints?"  
86:  
87: Witness: "On Mrs Rhinehart's diary and the answering machine in her  
88: apartment."  
89:  
90: Crown Prosecutor: "Whose fingerprints are they?"  
91:  
92: Witness: "Mrs Lisa Posley."  
93:  
94: Crown Prosecutor: "So Mrs Posley was in Mrs Rhinehart's  
95: apartment at the same time."  
96:  
97: Witness: "It would appear so."  
98:  
99: Crown Prosecutor: "No further questions your Honour."  
100:  
101: Next followed the cross-examination by the defence attorney, played by Claire Beck.  
102: The defence attorney did not end up writing her own script as she really was too  
103: confused about tying evidence in to the trial and had little idea of what she should say  
104: or do. The following conversation is indicative of the difficulty she was having.  
105:  
106: Claire Beck: What's another question I can do based on these people?  
107: Lara: I've got the names of the jury and they're bringing in stuff  
108: as well.  
109: Claire Beck: What does this mean that she was putting on makeup at  
110: the time? What the hell does that mean?  
111: Anna: OK, where's this? Remember they were putting on  
112: makeup to make them look black, the swami was black so he put black  
113: makeup on to make him look black.  
114: Claire Beck: What can I do because I'm the rejecting person, so what  
115: can I do to put on that Henry was black?  
116: Anna: So what do you mean? You're with Henry, so, "how can  
117: you prove this sponge was used to put on makeup? (Claire Beck wrote this  
118: down as though it were being dictated.)  
[Transcription from Second  
119: Lesson, 17-10-01, Period Four.]  
120: When talking with her about it she appeared to follow what you were saying but did  
121: not appear confident to write anything for herself. I wrote in my field observation  
122: notes, "Claire Beck doesn't know where to begin in writing the questions for her

123: defence. Where Anna has written pages worth of questions, Claire Beck chooses to sit and  
124: stare, waiting for someone to start her off. She appears to understand what she has to  
125: do but lacks the initiative to do it independently. Ms Manor has had to spend time today  
126: explaining what type of questions she should use. Claire Beck has written her questions  
127: today and Debbie Stone is going to take home everything and type it up into the script tonight,  
128: ready for tomorrow's run through." [From field-notes, Wednesday 24-10-01, Periods 5  
129: & 6] Throughout the entire two weeks Claire Beck showed that she had little confidence to  
130: go ahead and do anything on her own, she was constantly seeking approval that she  
131: was doing the right thing and seemed afraid to even attempt something in case it was  
132: wrong. During the third day of the integrated unit she asked the teacher about the type  
133: of questioning she should have as defence attorney, the teacher responded, "casting  
134: doubt – eg the hairbrush. How do you know it belonged to Henry Posley? Your job is  
135: to cast doubt and also with Mimi. You could ask things like, "Did you willingly sign  
136: the contract?" and "What was your relationship with Henry Posley?" Your job is to  
137: make it look as if she is acting like a jilted lover." [From field-notes, October 18th  
138: 2001, 12:15 p.m.] Towards the end of the day Claire Beck came back to the teacher with  
139: some questions written seeking approval. Ms Manor spoke to her and said, "How many  
140: fingerprints do you need to prove that these belong to Henry Posley? You can do this  
141: and then when they don't know or give a number bigger than they have you can tell  
142: the court that they can't prove anything." [From field-notes October 18th 2001, 2:32  
143: p.m.]  
144: The teacher had helped her write her script and she was supposed to do her own  
145: summation but even that did not get done and the teacher wrote it just before the trial  
146: began as she did not have anything prepared. I wrote in my field observations of the  
147: run through of the trial the day before they were to do the real thing, "Claire Beck had put  
148: her questions on a disk yesterday and given them to Debbie Stone to add to the script last  
149: night. Debbie Stone says she put everything that was on the disk into the script, but the  
150: questions are not there! Claire Beck gets very upset. This is where Ms Manor tells her not to  
151: "drop her bottom lip"...Claire Beck sits with her head on the desk moping as she feels  
152: angry and defensive....Claire Beck and Debbie Stone can't find the questions on the disk [It may  
153: well be an error in saving to the disk as many girls are unsure about the correct usage  
154: of their laptops] and Debbie Stone has to try to help Claire Beck write the questions again. Claire Beck's  
155: behaviour indicates that she feels as if others will think that she has done nothing"  
156: [Excerpt from field notes dated 25-10-01, Period 3 & 4] and she is probably right. She  
157: did however do a convincing job in the dramatic presentation of her case and in this  
158: sense was better than the crown prosecutor who read her script loudly and  
159: competently but without any real conviction. Her quick read through of her  
160: summation that the teacher wrote for her was enough for her to portray the character

161: extremely well and therefore led me to believe that she appeared to understand the

162: reasoning behind what the teacher wrote but was unable to know where to start when

163: writing it for herself. The following excerpt is taken from the transcription of the team

164: meeting I attended shortly before the actual trial and supports my ideas about her. It

165: begins with the teachers discussing the distribution of awards for the integrated unit as

166: they felt that this would be a good way to acknowledge students who had contributed

167: well to the integrated unit.

168: Ms Corr: How do you give it to one of the lawyers without giving it

169: to the other?

170:

171: Ms Manor: Well Claire Beck is the other one and she is not good at coming

172: up against adversity and so crumpled into a heap.

173:

174: Researcher: That was before she blew up.

175:

176: Ms Barter: Laughing.

177:

178: Ms Manor: She and Debbie Stone had a few words occasionally and there

179: were a few tears, so I don't know that I will necessarily give it to

180: Claire Beck but I will definitely give one to Lara.

181:

182: Researcher: Has she actually written a closing argument?

183:

184: Ms Manor: She's done the idea she just can't put it down on paper.

185:

186: Researcher: Has she actually tried to put it down on paper? She wants

187: you to dictate it to her.

188:

189: Ms Corr: She can present it.

190:

191: Ms Manor: She'll do a good job of that because that's where she

192: likes it because I'm very dramatic and will say, "Ladies and gentlemen of

193: the jury, my client has been tricked into this" and she goes, "Oh" and

194: quickly writes it all down. So then when she comes up to it she will do a

195: great job.

196:

197: Ms Barter: Well they're relevant skills.

198:

199: Ms Manor: I've written bits and pieces of the script for her and so

200: she is going to do a good job.

201:

202: Ms Barter: She has a very sonorous voice too so that will help her in

203: the court scene. (Transcription from Team Meeting, 26-10-01.)

204: Why she had difficulty in this manner could be for any one of a number of

205: reasons, her lack of conviction in her ability to write the correct thing

206: and her fear of being wrong, to name just two. She had a lot of conviction

207: in herself as being good at English and drama and I would have expected

208: her to at least feel that she was competent to write her questioning

209: unless she had experienced failure before in science and had become

210: unwilling to put her ideas on the line for all to see.

211: Judge: "Do you wish to cross-examine Mr Bahamas? [The

212: Defence Attorney.]"

213:

214: Defence attorney: "Yes your Honour. How many fingerprints did

215: you find on the brush that was found in the rubbish bag outside the Swami

216: Morishu's apartment?"

217:

218: Witness: "I found five fingerprints on the brush but only two were clear

219: enough to identify as Henry Posley's."

220:

221: Defence attorney: "Are you telling the jury that there are only two

222: clear fingerprints used to identify the person whose fingerprints were on

223: this hair brush?"

224:

225: Witness: "Yes."

226:

227: Defence attorney: "So how can you claim to have identified Henry

228: Posley as Swami Morishu?"

229:

230: Witness: "Well I have had twelve years of experience. I should know."

231: [Said condescendingly.]

232:

233:

234: Defence attorney: "Is it not correct that you need eight fingerprints

235: to accurately identify someone?"

236:

237: Witness: "Well, yes." [Said very hesitatingly.]

238:

239: Defence attorney: "So you can't be completely sure that these

240: fingerprints found on the hairbrush, found in a rubbish bag are Henry

241: Posley's?"

242:

243: Witness: "There is some room for doubt, but not much."

244:

245: Defence attorney: "Some room for doubt? Mmm, no further

246: questions your Honour." [Said with total conviction and understanding of

247: the implications of the question. The inflections in her voice all indicated

248: that she was completely aware of what she was saying and the part it

249: played in the unfolding of the script and the decision made by the jury. It

250: may be that this wasn't the case and that her flair for the dramatic

251: allowed her to appear knowledgeable about what she was saying without

252: really understanding it.]

253:

254: Next follows the cross-examination of the "hair fibre and DNA expert" written by

255: Anna. The responses were all thought of and written by the "expert" Annie

256: Rush, who I have interviewed, after obtaining the questions she would be asked

257: from Anna. Both witnesses are good students who are very capable and

258: conscientious and it is certainly for this reason that the teacher manipulated the voting

259: for girls to take on certain roles so as to guarantee that these two girls were in fact the

260: expert witnesses. It took a lot of thought to come up with responses and questions that  
 261: would lead the jury to arrive at a conviction and these three girls, in particular, were  
 262: very good at doing just this. There were possibly a few other girls who could have  
 263: done the job but I feel that they would not have been as reliable as the students  
 264: chosen. The decline in reliability was for social reasons; they were capable but too  
 265: easily distracted and not able to be depended on to come up with the results when  
 266: needed.  
 267: The trial resumed.  
 268:  
 269: Crown Prosecutor: "I call Dr Christy Tayler, the hair fibre and DNA  
 270: expert, your Honour."  
 271:  
 272: Crown Prosecutor: "State your name and occupation for the court."  
 273:  
 274: Witness: "My name is Dr Christy Tayler and I am an expert in hair and  
 275: fibre analysis and DNA."  
 276: Annie Rush was determined, when choosing her character profile that she was  
 277: going to be a young, attractive female and not afraid to be seen as  
 278: intelligent. She objected to be confined to writing her character profile  
 279: as a stereotype as noted in the following quotation.  
 280:  
 281: Annie Rush: Adjectives are doing words?  
 282: Jane: Describing words.  
 283: (Annie Rush starts writing some adjectives down to describe her character's  
 284: personality.)  
 285: Annie Rush: (After thirty seconds.) My adjectives to describe my  
 286: personality are happy, energetic, fun, loving ...  
 287: Jane: You're not really a stereotype are you?  
 288: Annie Rush: No.  
 289: Jane: You're supposed to be.  
 290: Annie Rush: No. You're the stereotype; I don't need to be a stereotype.  
 291: Jane: What if I don't want to be the stereotype?  
 292: Annie Rush: Well you're stuck with it now. [Transcript 17-10-01,  
 293: Second lesson.]  
 294: She relished the idea of wearing a sophisticated suite and high heels and yet  
 295: determined to bring an air of naivety into her character, which she obviously felt  
 296: belonged to such an intelligent female. She also took great pains to try to make her  
 297: choice of time in the field etc to match that of her character's age and status. This was  
 298: evidenced in her questioning with me about how many years she would need to study  
 299: something to be considered an expert and in her calculations of how old her character  
 300: would need to be.  
 301: Student: (Annie Rush) Thirty to forty? No that's too... I'll just put thirty-five to  
 302: forty.  
 303: Researcher: Well you would need to be in your thirties at least to be  
 304: considered an expert.  
 305: Student: (Annie Rush) Thirty-five to forty. Should I be young or old? Can I be a  
 306: young expert? [Transcript 17-10-01, Second lesson.]  
 307:  
 308: The trial continued with the questioning of the DNA expert.

309:  
 310: Crown Prosecutor: "How long have you studied in this field Ms  
 311: Tayler?"  
 312:  
 313: Witness: "Five years."  
 314:  
 315: Crown Prosecutor: "What did you find on the brush found in the  
 316: rubbish from the Swami's apartment?"  
 317:  
 318: Witness: "A number of hair fibres and other fibres."  
 319:  
 320: Crown Prosecutor: "What colour hairs were on the brush?"  
 321:  
 322: Witness: "Red and some black synthetic hair."  
 323:  
 324: Crown Prosecutor: "Who did that hair belong to?"  
 325:  
 326: Witness: "The red hair belonged to Henry Posley and the black is from  
 327: the wig, as it is not real hair. The black hairs are very thick and curly."  
 328:  
 329: Crown Prosecutor: "Swami Morishu had black curly hair but he had  
 330: red fibres on his hair brush. The doorman will confirm that only three  
 331: people visited and they had blonde, grey and brown hair. The red hair  
 332: fibres found on the hair brush belonging to Henry Posley, who had not  
 333: been seen visiting the Swami, so Swami Morishu must have been wearing  
 334: a wig as a disguise hiding the fact that he was Henry Posley." [This was  
 335: said very well and the inflections in the voice indicated full  
 336: comprehension of the manipulation of the facts.]  
 337:  
 338:  
 339: Defence attorney: "Objection your Honour. The Crown has not  
 340: proved that Henry is the Swami, so it is not a fact." [This was said with  
 341: great conviction and had been said in interruption to the last few words of  
 342: the Crown Prosecutor. [The timing of the interjection indicated that she  
 343: had been following the reasoning and was aware of the implications being  
 344: forwarded and her own role in the scene.]  
 345:  
 346: Judge: "Sustained. If you have no further questions Ms Taylor  
 347: the defence can cross examine."  
 348:  
 349: Crown Prosecutor: "No further questions your Honour."  
 350:  
 351: Defence attorney: "Doctor Tayler, who found the hair brush?"  
 352:  
 353: Witness: "I believe it was Mrs Rhinehart's niece and her friend."  
 354:  
 355: Defence attorney: "Is it possible that they could have planted Henry  
 356: Posley's hairs on the brush?"  
 357:  
 358: Witness: "I guess it's possible but it's not very likely."

359:  
360: Defence attorney: "But it is possible. No further questions your  
361: Honour." [This was interjected in to the last few words uttered by the  
362: witness and the witness was not permitted to continue speaking. It was a  
363: very convincing rendition of many a court room scene seen on television.]  
364:  
365: Judge: "Do you wish to re-examine Ms Taylor?"  
366:  
367: Crown Prosecutor: "No your Honour."  
368:  
369: The next witness called to the stand was Mrs Mimi Rhinehart. This girl was not  
370: interviewed but always appeared full of energy, could be quite distracting for some of  
371: the girls but got her own work done very well and with a lot of effort that her "cool"  
372: friends didn't seem to notice so much. A lot of background information was called for  
373: and then the Crown Prosecutor established that a séance that Mrs Rhinehart and her  
374: niece were attending stopped abruptly when her niece closed the blinds and no more  
375: flashing lights could be seen from across the road. Sandwiches were called for and the  
376: Swami became very agitated when he could not find, what Mrs Rhinehart assumed  
377: was, the receipt.  
378:  
379: Crown Prosecutor: "So let me get this right. As soon as the blinds on  
380: the window were closed and no vibes or light could come in from outside  
381: the séance didn't continue. Am I correct?"  
382:  
383: Mimi Rhinehart: "Yes you are."  
384:  
385: Crown Prosecutor: "Why did you go to the Effie Crump theatre?"  
386:  
387: [A long, awkward pause as the girl struggles to think of a response. She had been  
388: away sick and had not managed to get everything prepared. The teacher had to  
389: whisper the response out to her as it was not written into the script. For a lot of this  
390: cross-examination the script was adhered to but Anna added her own ideas as the  
391: trial proceeded, she had her own notes that she was working from not the actual  
392: script. The next part of Aunt Mimi's questioning was not in the script and the teacher  
393: had to prompt replies.]  
394:  
395: Mimi Rhinehart: "The Swami told me to go."  
396:  
397: Crown Prosecutor: "Who did you discover had written, produced and  
398: starred in the play The Marigold Prophecy?"  
399:  
400: Mimi Rhinehart: "Henry Posley."  
401:  
402: Crown Prosecutor: "Why did you agree to finance the play and send  
403: it to Broadway?"  
404:  
405: Mimi Rhinehart: [The teacher whispers her response to her.]  
406: "Because the Swami told me it was my destiny."  
407:  
408: Crown Prosecutor: "If the Swami hadn't told you to see the play and  
409: realised who was in it, would you have financed it?"  
410:  
411: Mimi Rhinehart: "No."  
412:  
413: Crown Prosecutor: "Did you know Henry Posley was married?"  
414:  
415: Mimi Rhinehart: "No. The Swami told me he was my destiny, my  
416: one true love."  
417:  
418: Crown Prosecutor: "No further questions your Honour."  
419:  
420: [The witness was then cross-examined by the defence attorney.]  
421:  
422: Defence attorney: "It's a lot of money, three million dollars. Did  
423: you change your mind Mrs Rhinehart and decide that you didn't want to  
424: give Henry the money?"  
425:  
426: Mimi Rhinehart: "No I didn't."  
427:  
428: Defence attorney: "Mrs Rhinehart, how did you feel when you found  
429: out Henry Posley was married?"  
430:  
431: Mimi Rhinehart: "I was very angry and upset."  
432:  
433: Defence attorney: "Did he ask you to marry him?"  
434:  
435: Mimi Rhinehart: "No."  
436:  
437: Defence attorney: "So you just assumed that he would marry you?"  
438:  
439: Mimi Rhinehart: "Maybe, I wasn't quite sure at that time."  
440:  
441: Defence attorney: "Could it be that you were simply jealous and  
442: hurt because you believed that Henry was going to marry you and you  
443: brought these charges against him as a punishment?"  
444:  
445: Mimi Rhinehart: "No way, I wouldn't do that."  
446:  
447: Defence attorney: "Did Henry Posley force you to sign the  
448: contract?"  
449:  
450: Mimi Rhinehart: "Well maybe. It's hard to tell."  
451:  
452: Defence attorney: "Mrs Rhinehart, would you agree that you  
453: willingly signed a contract with someone who you had romantic ideas  
454: about and then wanted to get out of the contract when you discovered he  
455: was married?"  
456: This was not in the script the girls were working with and had been worked out by  
457: Claire Beck with the teacher's help. Each of the girls had their own separate scripts to  
458: work from which differed from the main script that most were working from. The trial  
459: however flowed quite smoothly and the girls appeared to take it all in their stride.  
460:  
461: Mimi Rhinehart: "No."  
462:  
463: Next followed the cross-examination of Mrs Rhinehart's 13 year old niece, Carrie Kat

464: who was asked to give an account of the séance. We pick up the cross-examination at  
465: the point of discussing the flashing lights.  
466:  
467: Crown Prosecutor: "Were those lights the same one's as the one's  
468: Mrs Rhinehart said earlier?"  
469:  
470: Carrie Kat: "Yes."  
471:  
472: Crown Prosecutor: "Where were the flashing lights coming from?"  
473:  
474: Carrie Kat: "Through the window."  
475:  
476: Crown Prosecutor: "Could you identify whose apartment that was?"  
477:  
478: Carrie Kat: "Yes, it was Aunt Mimi's."  
479:  
480: Crown Prosecutor: "How can you be sure it was Mrs Rhinehart's  
481: apartment?"  
482: Carrie Kat: "I could see Rex." [The teacher had written in  
483: her own copy of the script on page nine, "her dog – it's a lamp, and my  
484: room." The girls did not realise that they needed to supply that  
485: information to people who had not read the story. It was difficult for them  
486: because they had all read the story and could not appreciate the difficulty  
487: others would have in following the information if key pieces of  
488: information such as this were left out.]  
489:  
490: Crown Prosecutor: "Did you see who and what was causing the  
491: flashing light?"  
492:  
493: Carrie Kat: "Yes. A blonde woman had a mirror and  
494: binoculars; she was watching the Swami and flashing messages to him  
495: with the mirror."  
496:  
497: Crown Prosecutor: "If that blonde lady is in the court today can you  
498: point her out to me?"  
499:  
500: Carrie Kat: "Yes, that's her over there, Mrs Posley."  
501:  
502: Crown Prosecutor: "Did you feel that there was some relation  
503: between the flashing lights and the Swami's answers?"  
504:  
505: Carrie Kat: "Yes."  
506:  
507: Crown Prosecutor: "What do you think the relationship was?"  
508:  
509: Carrie Kat: "It was one flash for yes and two flashes for no."  
510:  
511: Crown Prosecutor: "Do you think that it is possible that the woman  
512: with the binoculars in Mrs Rhinehart's apartment was reading the  
513: Swami's lips?"  
514:  
515: Carrie Kat: "Yes."  
516:  
517: Crown Prosecutor: "What happened next?"  
518:  
519: Carrie Kat: "I closed the blinds."  
520:  
521: Crown Prosecutor: "What was the Swami's reaction?"  
522:  
523: Carrie Kat: "He lost contact with Arma and became  
524: nervous."  
525:  
526: Crown Prosecutor: "Did the séance continue?"  
527:  
528: Carrie Kat: "No."  
529:  
530: Crown Prosecutor: "Did Swami order sandwiches?"  
531:  
532: Carrie Kat: "Yes."  
533:  
534: Crown Prosecutor: "Did you see who delivered the sandwiches?"  
535:  
536: Carrie Kat: "Yes, a blonde lady."  
537:  
538: Crown Prosecutor: "Can you point that lady out for me? [Points out  
539: Mrs Lisa Posley] Is this the same woman you saw in the apartment?"  
540:  
541: Carrie Kat: "Yes."  
542:  
543: Crown Prosecutor: "Did you find anything inside the sandwich  
544: bag?"  
545:  
546: Carrie Kat: "Yes, a small bit of paper with nothing on it."  
547:  
548: Crown Prosecutor: "What did you do with the paper?"  
549:  
550: Carrie Kat: "I put it in my pocket."  
551:  
552: Crown Prosecutor: "Did the Swami seem upset when he couldn't find  
553: the sheet of paper?"  
554:  
555: Carrie Kat: "Yes."  
556:  
557: Crown Prosecutor: "Did the séance continue after the sandwiches?"  
558:  
559: Carrie Kat: "No."  
560:  
561: Crown Prosecutor: "Were you suspicious of the Swami and if so what  
562: did you do about it?"  
563:  
564: Carrie Kat: "I rang Melanie."  
565:  
566: Crown Prosecutor: "When talking to Melanie and highlighting your  
567: concerns about the Swami, what did Melanie suggest you do to the blank  
568: sheet of paper?"  
569:  
570: Carrie Kat: "Put it under light."  
571:  
572: Crown Prosecutor: "What happened when you put the light next to  
573: it?"  
574:  
575: Carrie Kat: "There was a small code."

576:  
577: Crown Prosecutor: "Did you and Melanie  
observe the Swami's  
578: apartment through binoculars?"  
579:  
580: Carrie Kat: "Yes."  
581:  
582: Crown Prosecutor: "What did you see?"  
583:  
584: Carrie Kat: "We saw him putting  
out the rubbish."  
585:  
586: Crown Prosecutor: "Was this the rubbish  
bag that you took later that  
587: day while Melanie was talking to the doorman?"  
588:  
589: Carrie Kat: "Yes."  
590:  
591: Crown Prosecutor: "What did you find in  
the rubbish bag?"  
592:  
593: Carrie Kat: "We found a hair brush  
and some make up  
594: sponges."  
595:  
596: Crown Prosecutor: "Was the hair brush the  
same as the one given to  
597: the finger print and hair DNA specialist?"  
598:  
599: Carrie Kat: "Yes."  
600:  
601: Crown Prosecutor: "Following Aunt Mimi  
going to another séance  
602: with the Swami, what did she say happened?"  
603:  
604: Carrie Kat: [A 20 second pause  
while the script was riffled  
605: through to try to find the reply.] "Oh, he gave her the  
map."  
606:  
607: Crown Prosecutor: "What was Melanie  
doing at the time you went  
608: with Mrs Rhinehart?"  
609:  
610: Carrie Kat: "Oh, she followed the  
Swami to the Theatre."  
611:  
612: Crown Prosecutor: "Did you meet Melanie  
at the theatre and if so  
613: what did she say?"  
614:  
615: Carrie Kat: "Yes, she followed the  
Swami into the theatre and  
616: lost him."  
617:  
618: Crown Prosecutor: "When you were inside  
the theatre did you see the  
619: Swami?"  
620:  
621: Carrie Kat: "No."  
622:  
623: Crown Prosecutor: "Who did you see  
inside?"  
624:  
625: Carrie Kat: "Henry Posley."  
626:  
627: Crown Prosecutor: "After talking with the  
chef and his stating that  
628: Henry Posley was married, did you and Melanie  
think of a way to get Mrs  
629: Rhinehart to the Marriage, Birth's and Death's  
Centre?"  
630:  
631: Carrie Kat: "Yes."  
632:  
633: Crown Prosecutor: "What did you find  
there?"  
634:  
635: Carrie Kat: "We found that Henry  
Posley was married to Lisa  
636: Posley."  
637:  
638: Crown Prosecutor: "Given the hairbrush  
from the Swami's apartment  
639: has Henry Posley's fingerprints on it and the Swami  
told Aunt Mimi to go  
640: to the theatre and Melanie followed the Swami there  
where he  
641: disappeared, with the only person seen being Mr  
Posley, do you think that  
642: the Swami and Henry Posley are the same person?"  
643:  
644: Carrie Kat: "Yes."  
645:  
646: Crown Prosecutor: "Given that you  
identified the woman in Mimi  
647: Rhinehart's apartment and the woman who delivered  
sandwiches as the  
648: same person and Mr Henry Posley's wife, do you  
believe that she was  
649: working with Henry Posley to make up the character  
of the Swami to trick  
650: and defraud Mrs Rhinehart?"  
651:  
652: Carrie Kat: "Yes."  
653:  
654: Crown Prosecutor: "Did you see the Swami  
leave that theatre?"  
655:  
656: Carrie Kat: "No."  
657:  
658: Crown Prosecutor: "No further questions."  
659:  
660: The teacher interrupts at this point and says, "Your  
Honour we would like  
661: to request a recess please. So you girls can go and  
have a drink and what  
662: we do is this, the Judge leaves first, so he stands and  
bows and we all  
663: stand too, he leaves, the orderly escorts the jury out,  
and then you guys  
664: can go off, have a drink and come back." [This was  
done to allow the  
665: teacher some time with the defence attorney to help  
her prepare her line  
666: of questioning. After about ten minutes the trial  
resumed with the cross-  
667: examination of the witness by the defence attorney. ]  
668:  
669: Defence attorney: "How did your Aunt  
react when she found out  
670: that Henry Posley was married?" [Said in a rather  
stilted voice indicating  
671: that it was not thought about, simply read.]  
672:  
673: Carrie Kat: "She was very angry."  
674:  
675: Defence attorney: "Were you protective of  
your aunt? Would you lie  
676: or plant evidence to protect her? Why didn't you tell  
her that you thought  
677: that Henry Posley was trying to trick her before she  
signed the contract?"  
678:  
679: [A pause while the teacher tells Carrie Kat what her  
answer should be.]  
680:  
681: Carrie Kat: "No one could tell her."  
682:  
683: Defence attorney: "So you could have  
stopped her signing it but you

684: didn't. And when Mrs Rhinehart found out that she was married she  
685: wanted to pull out of the contract. No further questions your Honour."  
686:  
687: The defence attorney did not do a good job of the reading because she had not had  
688: time to digest the intent behind the questions that the teacher had written. However, at  
689: this point there was a pause in the questioning and the trial stopped for almost three  
690: minutes while the crown prosecutor tried to find her questions for the doorman. In this  
691: time the defence attorney read through the rest of her questions and when the trial  
692: resumed was confidently able to carry out her cross-examination. In this brief time her  
693: demeanour had changed to one of confidence. The crown prosecutor established that  
694: the doorman was at his post and that he had only seen two people enter the Swami's  
695: apartment as clients. Next followed the defence attorney's cross-examination of the  
696: witness where Claire Beck spoke with confidence.  
697:  
698: Defence attorney: "How many hours a day would you be on the  
699: door at 53 Darley St South Perth?"  
700:  
701: Doorman: "Eight hours a day."  
702:  
703: Defence attorney: "So for the other 16 hours anyone could have  
704: visited Swami Morishu? Even someone like Henry Posley?" [This was  
705: said with a great air of triumph.]  
706:  
707: Doorman: "Well, I suppose so."  
708:  
709: Defence attorney: "No further questions your Honour."  
710:  
711: The next witness to be called to the stand by the Crown Prosecutor was  
712: Melanie.  
713:  
714: Crown Prosecutor: "When Mrs Rhinehart, Carrie and you went to the  
715: theatre, did you leave them to follow Swami Morishu to the theatre?"  
716:  
717: Melanie: "Yes."  
718:  
719: Crown Prosecutor: "What happened when you got to the theatre?"  
720:  
721: Melanie: "He went into the theatre."  
722:  
723: Crown Prosecutor: "Did you see Henry Posley on the stage during  
724: the play?"  
725:  
726: Melanie: "Yes."  
727:  
728: Crown Prosecutor: "What was your comment to Carrie about Henry  
729: Posley?"  
730:  
731: Melanie: "It's the swami on the stage acting."  
732:  
733: Crown Prosecutor: "So you believe that Swami Morishu and Henry  
734: Posley are the same person?"  
735:  
736: Melanie: "Yes – we found out through our detective work. We  
737: found the hairbrush, the sponges with makeup on them, the message from  
738: the blonde in the apartment, and when the Swami went to the theatre and  
739: Henry was there we knew it had to be him. They even smoke the same  
740: cigars!"  
741:  
742: The cross-examination was brief but to the point.  
743:  
744: Defence attorney: "Did you find the Swami or any evidence that he  
745: was in the theatre?"  
746:  
747: Melanie: "Well no, nothing directly but they smoke the same  
748: cigars."  
749:  
750: The next witness called to the stand was Michelle Jordan the lawyer used for drawing  
751: up the contract for financing Henry Posley's play.  
752:  
753: Crown Prosecutor: "Upon hearing the amount that Mrs Rhinehart  
754: had to invest in the play, what was her reaction?"  
755:  
756:  
757: Michelle Jordan: "She wasn't sure at first but he reassured her. She  
758: wanted to get independent advice, but he said they would only try to  
759: change her mind."  
760: The cross-examination followed.  
761:  
762: Defence attorney: "Was Mrs Rhinehart forced into sign the  
763: contract?"  
764:  
765: Michelle Jordan: "No."  
766:  
767: Defence attorney: "Did Mrs Rhinehart seem prepared to sign the  
768: contract?"  
769:  
770: Michelle Jordan: "Yes, but at first she was not that confident. I  
771: assumed Mrs Rhinehart was happy enough when she said she had brought  
772: her special pen."  
773:  
774: Defence attorney: "A special pen? Hmmmm. No further questions  
775: your Honour."  
776: The judge had not been following and did not know that it was her turn to speak. The  
777: teacher needed to give her the line before they could proceed. The trial came to an end  
778: and the Crown Prosecutor was called upon to present her final arguments.  
779:  
780: Crown Prosecutor: "Ladies and gentlemen of the jury the prosecution  
781: has clearly shown that Henry Posley acted as the Swami to get three  
782: million dollars from Mimi Rhinehart. We have clearly shown that Lisa  
783: Posley was in Mimi Rhinehart's apartment and was sending messages to  
784: the Swami using a mirror and Morse Code furthermore she sent messages  
785: to the Swami in a sandwich bag, which she delivered herself. Henry  
786: Posley dressed up as a Swami to trick Mimi and to get money for himself.

787: In the garbage bags thrown out by the Swami there was a brush with  
788: Henry Posley's fingerprints and hair on it, there was also black hair  
789: fibres from a wig belonging to the Swami. In the rubbish there were also  
790: make up sponges with dark makeup on them. Now the Swami has black  
791: hair and dark skin and Henry Posley has red hair and light skin and the  
792: brush was from the Swami's apartment, so what was Henry Posley doing  
793: in the Swami's apartment. The Swami tricked Mimi into thinking that  
794: Henry Posley was her true love so that she would invest the three million  
795: dollars. She was tricked, defrauded into signing. The question is why? She  
796: also stated herself that she wouldn't have signed the cheque without the  
797: Swami, she said herself she didn't trust him."  
798:  
799: Defence attorney: "Ladies and gentlemen of the jury  
800:  
801: Teacher: "Hang on Claire Beck. Debbie Stone [Judge.]"  
802:  
803: Judge: "You may present your final argument Mr  
804: Bahamas."  
805:  
806: Defence attorney: "Ladies and gentlemen of the jury despite the  
807: prosecution's colourful tales of Swami Morishu's impersonations and  
808: young girls' fanciful ideas, the true story here today is that Mrs Rhinehart  
809: entered into a contract with Henry Posley in order to entice him into  
810: becoming romantically involved with her. She had dreams of romance,  
811: marriage and fame but when she discovered that my client Henry Posley  
812: was married her hopes were dashed. This is why she wants to have the  
813: contract dissolved. She willingly signed the contract, even signing it with  
814: her special pen. Henry Posley didn't force her into it Mrs Rhinehart wants  
815: revenge because she has a broken heart. Thankyou.  
816:  
817: Judge: "The jury will now retire to make their decision.  
818: Madam Foreperson, when the jury has made a unanimous decision please  
819: inform the court."  
820:  
821: Teacher: "Now girls you need to take a piece of paper, go outside  
822: and when you all agree come back and tell the court orderly."  
823:  
824: The girls in the jury, eight girls in total, went outside the classroom to come to a  
825: decision. The teacher gave them a sheet of paper with the heading, "For the Jury to  
826: decide" and instructed them again that the decision was to be unanimous. Nowhere on  
827: the sheet did it have recorded that Henry Posley was being tried for fraud and that his  
828: guilt or innocence in relation to the fraud was the issue. Each girl completed the sheet  
829: they were given and then they attempted to come to a decision concerning Henry

830: Posley's crime. The jury sheet had five questions on it, the first four requiring a mark  
831: on a bipolar line from "convinced" at one end to "not convinced" at the other. They  
832: needed to decide how convincing the defence and prosecution were about whether  
833: Henry was the Swami, the blonde was in Mimi's apartment, the blonde was indeed  
834: Henry's wife and it had been shown how Henry would have benefited from taking the  
835: money. In addition they had to decide which of the defence or prosecution gave the  
836: most convincing argument. Out of the eight girls comprising the jury only seven  
837: completed the form and five of these were convinced or close to convinced that the  
838: first four questions had been adequately answered. One was not convinced that it had  
839: been shown how Henry would have benefited from taking money from Aunt Mimi  
840: and one could not decide if this had been adequately done. Both of these girls felt that  
841: the defence gave the most convincing argument. Her rendition of her closing  
842: argument was certainly more dramatic than the prosecution's rendition and for that  
843: reason the most convincing. Of the five girls who felt that there had been sufficient  
844: evidence to explain how Henry would have benefited from the money, three of them  
845: felt that the prosecution's closing argument was the most convincing and two could  
846: not choose between them. [Collected from "For the Jury to decide" sheets for each of  
847: the jurors.]  
848: The girl who did not complete the sheet was the one who was determined that Henry  
849: was not guilty. I wrote in my field notes, "the girl was adamant that Aunt Mimi signed  
850: the contract voluntarily and that none of the other evidence matters. The girl agreeing  
851: with her did not really have her own ideas but when I pressed her to tell us what she  
852: was thinking she admitted that in a way he's guilty because he tried to trick her and  
853: the evidence confirmed that. She appeared very unsure of herself and in my opinion  
854: was just siding with her friend." [Field notes dated 26-10-01, Period 3 & 4.] The girls  
855: had been talking around in circles for a while and getting nowhere so I asked them all  
856: a question, "Did Henry Posley try to trick Aunt Mimi into signing the contract?" They  
857: all answered, "Yes" except for the girl who had decided that he was not guilty and she  
858: intervened with, "she signed the contract of her own free will". This fact prevented  
859: her from finding him guilty of fraud. "I think she failed to recognise that the crime  
860: was fraud as she did admit that the evidence proved that he had tried to trick her but  
861: still maintained that it was immaterial as Aunt Mimi had willingly signed the  
862: contract." [Field notes dated 26-10-01, Period 3 & 4, page 2.]  
863: Once the girl's friend had decided that Henry was guilty this one girl refused to  
864: consider anything other than his innocence and said, "that she didn't mind if they  
865: wanted to say he was guilty, it was all right, but she still thought he was innocent. ...  
866: The rest of the girls were becoming impatient and just wanted to give their verdict and  
867: be done with it. Some of them were worried that the verdict needed to be unanimous

868: though and this caused the delay. Casey took control and decided that they would  
869: never change the girl's mind, it wasn't worth arguing about and that they had better  
870: say it was unanimous, even though it was not. What the teacher didn't know wouldn't  
871: hurt her." [Field notes dated 26-10-01, Period 3 & 4, page 2.] In the end the jury went  
872: back in and declared Henry Posley guilty of fraud, claiming the decision to be  
873: unanimous.  
874: The Judge was required to read the finding and remand the guilty party for later  
875: sentencing. When Henry Posley was asked to stand the girl, who had been sitting  
876: quietly for the entire duration of the trial, stood in a comical fashion that made  
877: everyone laugh uncontrollably. This lasted for a minute while the judge finished the  
878: concluding remarks. At the second it was over the teacher applauded, said, "Well  
879: done" and then hastily called everyone together, reminded them that they needed a  
880: pen and set them to work finishing their self-reflection sheets.  
881: Before she let them start she asked them to think about things that they had learnt  
882: from this integrated unit.  
883: Teacher: "This integrated unit that we have just finished, I want  
884: you to have a think about what you have done over the last two weeks,  
885: have a thiiink, thiiiiink rououound about what you have done, and I'm  
886: going to ask you to tell me something that you have learnt, something that  
887: you sort of knew before but now you know better or something that you  
888: discovered, or something that you would like to find out now that you  
889: have done it all or something that you liked or didn't like during the last  
890: two weeks." [She then repeated all of this and allowed fifteen seconds  
891: before calling for ideas.]  
892: Student: "Should we do all of them?"  
893:  
894: Teacher: "Just one thing."  
895:  
896: Jane: "I learnt how to read maps better."  
897:  
898: Teacher: "Excellent. Ms Barter was telling me you did a great job  
899: in the bus too aligning the maps and things."  
900:  
901: Anna: "We learnt how to write a lot of questions."  
902:  
903: Teacher: "That's right, you did an excellent job writing those  
904: questions too because there were heaps of them."  
905:  
906: Casey: "I now know how hard it is for the jury to come to  
907: a decision."  
908:  
909: Teacher: "That's right. I was on jury duty in the holidays before  
910: last and I thought it would be a piece of cake and it was so hard, so you  
911: guys did an excellent job on the jury, so well done.  
912: The teacher continued questioning girls in this way with lots of positive comments  
913: about the work interspersed with things that they had learnt. This reflective, guided

914: discussion went on for eight minutes. The girls felt that they had learnt many things,  
915: including; writing a script is really hard, how to set out a courtroom, learnt how to ask  
916: questions, how to do mapping, learnt how to do percentages, how to follow directions,  
917: how to lay out a survey, the dress code for court, how the court works, how to do  
918: different graphs, learnt how to read maps, can't bring mobiles and recording devices  
919: into court, how to write a newspaper article, and you hold the Bible in the right hand.  
920: Interestingly none of these things would be considered belonging to the subject of  
921: science even though the unit was called an integrated forensic science unit. The  
922: compilation of the evidence and working it into the court scene did not appear to  
923: assume significance when questioned about what they had learnt. The questioning  
924: period ended and the girls were set to work answering the Self-Reflection sheet.  
925: All excerpts of transcriptions were taken directly from the tape labelled Forensic  
926: Science Unit, Trial, 26-10-01, side A, unless otherwise stated.  
927:

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## **Appendix T: Excerpt of a Document Text Report generated by NVivo**

NVivo revision 2.0.161 Licensee: Division of Engineering & Science

Project: Analysis of Transcriptions User: Administrator Date: 24/11/2003 -  
1:24:19 PM

### **DOCUMENT TEXT REPORT**

Document: Interview, Claire Beck  
Created: 29/07/2002 - 1:29:45 PM  
Modified: 26/09/2003 - 2:30:01 PM  
Description:

Interview with Claire Beck

#### Document Text:

1: §1 Interview with Claire Beck

2: The interview was recorded on the 19th November 2001, immediately following an interview with Annie Rush.

91: Claire: English because, I don't know, because I'm good at it.

92: Researcher: You're good at English?

93: Claire: Yeah, I'm better at English than any other subject.

94: Researcher: OK, so you feel more confident in English?

95: Claire: Yeah.

96: Researcher: So you tend to pay more attention then?

97: Claire: Yeah, and with Drama I've got a natural ability for so it's not like I have to put all my effort into it. It's just easy.

98: Researcher: OK. You're lucky aren't you? A lot of people don't like having to do things in front of other kids.

99: Claire: I do. I like performing.

100: Researcher: Oh, OK. You like English because you're better at it than your other subjects?

101: Claire: Yeah.

102: Researcher: And Drama because you're also better at that than your other subjects. Really you've just got a natural talent for it.

103: Claire: Yeah.

104: Researcher: OK, so you actually like the things that you learn best and the things that you actually do best at.

105: Claire: Yes.

106: Researcher: Mmm. Is there any way that your teachers could help you to learn better, say, in your maths and your science then? To make it more interesting for you?

107: Claire: No, not really.

108: Researcher: You're just not interested too much in it.

109: Claire: Yeah.

110: Researcher: OK. What sort of things do you enjoy about school? (Long pause.) Come on, there has to be something.

111: Claire: I like interacting with other children, like for example, if I had to do home school I wouldn't like that as much because I don't get to interact with other children. I don't get to learn how to perform, as in perform in front of other people, and conversation and stuff like that than you would at school. When you're at school you learn more.

112: Researcher: So it's the social opportunities that you have at school.

113: Claire: Yeah.

## **Appendix U: A section of dialogue between Anna and Claire Beck showing Anna's efforts at trying to help Claire Beck**

**The section of dialogue between Anna and Claire Beck during the Integrated Forensic Science Unit showing Anna's efforts at trying to help Claire Beck with her question writing for the trial**

NVivo revision 2.0.161 Licensee: Division of Engineering & Science

Project: Analysis of Transcriptions User: Administrator Date: 25/11/2003 - 1:14:46 PM

### **DOCUMENT TEXT REPORT**

Document: Second lesson, Forensics 17-10-01

Created: 14/08/2002 - 1:43:39 PM

Modified: 26/09/2003 - 2:30:01 PM

Description:

Green Group's second day in the Integrated Forensics Unit

Document Text:

1: §1 Green Group's second day in the Integrated Forensics Unit

2: §2 October 17th, 2001, Wednesday, Day three. Periods Two, Three and Four. This is one lesson before recess and then the two lessons sandwiched between recess and lunchtime.

195: There were four girls who were discussing the re-write of the trial: Anna (Prosecutor), Debbie Stone (Judge), Claire Beck (Defence Council) and Lara (Judge's Associate). These girls were told to move into a small alcove, off the main area where the rest of the class had to work. Their role was considered to be critical and they were most often visited by the teacher and closely supervised. There was a little less distraction and noise enabling them to concentrate on their task better. I wrote down part of their conversation whilst observing them from outside of the alcove, so as not to be too intrusive, and will include it here, as it will lead into the transcript.

196: Anna: Does the Judge's associate have to say anything?

197: Lara: Yeah.

198: Debbie Stone: I want the first half to write up soon.

199: Lara: The chef, I'm pretty sure has a last name. Mimi has a last name. Carrie, isn't Mimi her aunt? I'll check the story for names.

200: Anna: That can be your job.

201: Anna gives Lara a list of names she has quickly written out that she needs to check against the story.

202: Anna: Oh no! We have to survey thirty people.

203: Claire Beck: Oh no.

204: Anna: We can get it done, no more stress.

205: Lara: Who's the doorman?

206: Claire Beck: I'm not logged on.

207: Researcher: What are you doing?

208: Lara: (Explaining to the researcher.) I'm looking for witnesses, people to bring to stand. I'm looking for last names and jobs, because when they are brought out they have to state their name and job.

209: Debbie Stone: (Explaining to the researcher.) Claire Beck and Anna are looking at the questions for each witness and I'm writing the introduction for each person as they come up to the stand.

210: The teacher comes in.

211: Teacher: Jurors and expert witnesses will help you get all of the things that you need. Ask them. Tomorrow in the double you and whoever is getting the evidence can sit down and work it out together.

212: Debbie Stone: Samples and stuff you can bring to me and I'll label them say Exhibit A.

213: Anna: (Speaking to Claire Beck.) What you can do now is convert them into questions like, "How can you prove that this man sitting over there is the Swami? Do you recognise this hair sample? Answer, Yes.

214: Debbie Stone: I bring this sample of the hair to the courtroom. Can I say this in the script?

215: Anna: (Still speaking to Claire Beck.) If say yes, then I can convict her but if they say no then it is harder for me to convict them.

216: Debbie Stone moves off to speak with the girls who are the "expert witnesses" to get them to bring in evidence to the classroom tomorrow for the re-writers to use in the new script. It is at this point that I begin to record the last minutes of their conversation before the end of the lesson.

217: Lara: What, while you are writing down the notes, I've got Aunt Mimi Rhinehart and Carrie should be Rhinehart because she's her Aunt. There's another central character, Melanie. There's Henry Posely which is also Swami Morrishu, um the blonde whose name is Mrs Henry Posely, the doorman (don't know his name). There's Michelle Jordan, the chef (?), the chauffeur is Arthur. (Can't decipher this section of tape.)

218: Anna: (Writes this down.) Oh yeah, OK. OK, um that's the first.

219: Debbie Stone: Amy's bringing in a brush and um, Sarah-Jayne's

220: Claire Beck: (Interrupts what is being said.) What brush?

221: Debbie Stone: Remember they're the DNA people and the fingerprints.

222: Claire Beck: Who is?

223: Debbie Stone: Annie Rush.

224: Claire Beck: Why is she doing that?

225: Anna: Because they need to bring in evidence.

226: Debbie Stone: She's bringing in the hairbrush with samples of the hair and Sarah-Jayne's bringing in the mirror.

227: Anna: They need to get red hair from someone.

228: Debbie Stone: A mirror? That's right, they'll do that.

229: Lara: What time is it?

230: Claire Beck: What's another question I can do based on these people?

231: Lara: I've got the names of the jury and they're bringing in stuff as well.

232: Claire Beck: What does this mean that she was putting on makeup at the time? What the hell does that mean?

233: Anna: OK, where's this? Remember they were putting on makeup to make them look black, the swami was black so he put black makeup on to make him look black.

234: Claire Beck: What can I do because I'm the rejecting person, so what can I do to put on that Henry was black?

235: Anna: So what do you mean? You're with Henry, so, "how can you prove this sponge was used to put on makeup? (Writing this down as being dictated.)

236: Lara: Hey, we need to get the pen.

237: Anna: What pen?

238: Lara: A pen to use as Aunt Mimi's favourite pen.

239: Claire Beck: Oh yeah.

240: Lara: A fountain pen with blue ink.

241: Claire Beck: With blue ink. Fountain pen, I don't have one.

242: Lara: No, I've got one in my locker.

243: Claire Beck: Anna? Anna? Anna?

244: Lara: We're bringing a pen.

245: Anna: Yeah, no, Ms Manor has got one.

246: With this the girls shut down their computers and pack up their pens and pencils to finish with the integrated unit for the day. While the girls were having the preceding conversation the teacher was going over everything that the other class members needed to do for the next day, even to insisting that they get their diaries out and record what they have to do.

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## **Appendix V: Integration in the middle school**

The page newly added in to The College's "Subject Information" booklet for year 7, 8 and 9, 2004 and not present in previous years.

### **The Integrated Curriculum**

The nature of the workforce has changed dramatically over recent years and it is generally acknowledged that today's students will experience several different occupations over their working life, with the likelihood that the work that they engage in may not yet exist. Consequently, the nature of education has had to change to equip students for the future. Essentially, girls graduating from the College must be able to adapt to changing environments, work effectively in teams, and coordinate information from a variety of sources. While Senior School is restricted by the requirements of the TEE and WSA syllabus's; that focus in on acquiring knowledge and skills in five or more separate subjects, it is in the Middle School that there exists the flexibility to address the essential work skills that will be required by your daughter when she enters the workplace.

To develop these essential skills, your daughter will be engaged in authentic, higher-order learning tasks that deal with important open-ended questions about her place in society. These questions cater for a range of different student learning styles and developmental stages. They are delivered using a range of teaching and learning strategies to develop the skills and processes that encourage life-long learning. The Integrated Curriculum takes the ideas about how the world works from the traditional content subjects and the way we make meaning of the real and imagined world from the process subjects and blends these two together. Connections between the disciplines can be established, learning is viewed as a holistic activity and girls develop the ability to draw on knowledge from a diverse range of sources to make meaning of the questions they explore.

There are several different models for delivering the Integrated Curriculum at The College. Girls will still experience a conventional subject based curriculum for a significant portion of their class time. However, it is likely that they will experience a multidisciplinary curriculum, in which several teachers from the same team offer work related to a central theme or topic. Sometimes it is possible to coordinate an integrated curriculum, where block time is set aside so students can pursue topics and themes across subject lines. All subject areas are touched upon within the context of a unit. As student confidence with this style of learning grows, girls will experience an integrative curriculum. In this model girls become the prime curriculum developers and there is no division of knowledge into separate subjects. Students reveal what is important to them, and with the help of their teachers, construct theme-based units of study using a structured process. Subject matter is not discarded; rather, it is integrated into the overall area of study and therefore becomes meaningful for the student. The dynamic between teachers and students changes dramatically in this model, where teachers facilitate the separate learning of each student rather than "instructing" a whole class. Students engaged in a Gifted and Talented program may take this model a step further and be involved in independent

or self-directed study where they plan and execute their own curriculum that focuses on the outcomes they wish to achieve.

In general, the Integrated Curriculum will have a project focus and require girls to work both collaboratively and individually through tasks to complete the theme of study. The project briefs, trial work, related activities and completed project would all contribute to the integrated theme and form part of your daughter's portfolio.

