The knowledge building community project: a grounded theory of an alternative teacher education model

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University of Wollongong


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The Knowledge Building Community Project: A Grounded Theory of an Alternative Teacher Education Model

A thesis submitted in fulfilment of the requirements for the award of the degree

Doctor of Philosophy

from

University of Wollongong

Julie Maree Kiggins
(B.Ed Hons)

Faculty of Education

2002
Acknowledgments

An undertaking such as a Doctoral study, whilst it often appears to be a lonely journey, is really the culmination of many peoples’ combined efforts and support.

Firstly to my husband Peter and son Elliot who know as much about the KBC Project as anyone for your never-ending love, support, encouragement, patience and the continual supply of coffee and chocolate brought to the computer thank you.

To my supervisors Brian Ferry and Garry Hoban for their support, advice, and encouragement, and for all your tireless efforts thank you.

To my mentor, Brian Cambourne your wisdom and advice is truly appreciated.

Thank you to the 1999 KBC students who trusted me to tell their story. Thank you for all your efforts and your patience with me as I am sure you must have felt at times that the questions were never going to stop.

Without the participation and cooperation of the school-based teachers, in-school coordinators and principals who supported the KBC Project there would be no KBC Project; thank you for your time, trust and patience.

Julie Kiggins
University of Wollongong
April 2002
Abstract

This research explores the experiences of a group of preservice teachers in the first two years of their experiences in an alternative model of teacher education known as the Knowledge Building Community Project (KBC) at the University of Wollongong in 1999. The KBC Project was initiated as a response to research that suggested preservice teachers needed more experience with the day-to-day operation of schools, and how the daily work of teachers related to the culture of schools and classrooms. The KBC model was based upon the intersection of three sources for learning; (i) Community Learning, (ii) School-based Learning and (iii) Problem-based Learning.

The research project uses qualitative methodologies encompassing formal and informal interviews, participant observation and the use of e-mail correspondence over a period of three semesters with the 22 pioneer students of the 1999 KBC Project. The thesis proposes a constructivist grounded theory that emerged as a result of seeking meaning from the students' experiences.

It was found that implementing an alternative model for teacher education based on Problem-based Learning was difficult but the data showed that the students involved benefited from the support of the community triad (the KBC facilitators, school-based teachers and each other). The data showed that being members of the community triad enabled students to develop friendship and trust which made working in collaborative school groups advantageous. The students said that the community triad supported their learning.

The thesis concludes with a chapter arising from this study that shows that there are key components needed in order to implement a KBC in teacher education. The key feature of the grounded theory highlights the importance of a structure to promote social interaction among the main participants. When students are given the opportunity and support of the community triad, they can develop an ownership and responsibility for their learning. A key trait is the ability of the students to link theory to practice as well as developing an increased understanding about the culture of schools and the way that they operate.
Declaration

I, Julie Maree Kiggins, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Education, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Julie M. Kiggins

25th April 2002
## Abbreviations used in this Thesis:

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<th>Description</th>
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<tbody>
<tr>
<td>BTE</td>
<td>Behaviouristic Teacher Education</td>
</tr>
<tr>
<td>C&amp;PII</td>
<td>Curriculum and Pedagogy II</td>
</tr>
<tr>
<td>CAPA</td>
<td>Creative and Practical Arts</td>
</tr>
<tr>
<td>CBTE</td>
<td>Competency-based Teacher Education</td>
</tr>
<tr>
<td>CL</td>
<td>Community Learning</td>
</tr>
<tr>
<td>CMC</td>
<td>Computer Mediated Communication</td>
</tr>
<tr>
<td>DET</td>
<td>Department of Education and Training</td>
</tr>
<tr>
<td>ESDF</td>
<td>Educational Strategic Development Fund</td>
</tr>
<tr>
<td>HSIE</td>
<td>Human Society in its Environment</td>
</tr>
<tr>
<td>ICQ</td>
<td>I Seek You</td>
</tr>
<tr>
<td>IMSA</td>
<td>The Illinios Mathematics and Science Academy</td>
</tr>
<tr>
<td>IOTE</td>
<td>Inquiry-Orientated Teacher Education</td>
</tr>
<tr>
<td>ISU</td>
<td>Iowa State University</td>
</tr>
<tr>
<td>KBC</td>
<td>Knowledge Building Community</td>
</tr>
<tr>
<td>MACQT</td>
<td>Ministerial Advisory Council on the Quality of Teaching</td>
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<tr>
<td>NSW</td>
<td>New South Wales</td>
</tr>
<tr>
<td>NSWTF</td>
<td>New South Wales Teachers' Federation</td>
</tr>
<tr>
<td>PBL</td>
<td>Problem-based Learning</td>
</tr>
<tr>
<td>PD/H/PE</td>
<td>Personal Development, Health and Physical Education</td>
</tr>
<tr>
<td>PE</td>
<td>Physical Education</td>
</tr>
<tr>
<td>PST</td>
<td>Preservice teacher</td>
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<tr>
<td>PTE</td>
<td>Personalistic Teacher Education</td>
</tr>
<tr>
<td>SBL</td>
<td>School-based Learning</td>
</tr>
<tr>
<td>SCNTP</td>
<td>Santa Cruz New Teacher Project</td>
</tr>
<tr>
<td>TA</td>
<td>Teacher Associate</td>
</tr>
<tr>
<td>TCTE</td>
<td>Traditional-Craft Teacher Education</td>
</tr>
<tr>
<td>UCSC</td>
<td>University of California – Santa Cruz</td>
</tr>
<tr>
<td>UOL</td>
<td>University of Louisville</td>
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<tr>
<td>UOW</td>
<td>University of Wollongong</td>
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<td>UTEP</td>
<td>University of Texas at El Paso</td>
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Chapter One: Introduction

Prior to the 2000 release of the Ramsey Report: “Quality Matters”, the University of Wollongong (UOW) on the NSW South Coast had begun an alternative model of teacher education. It is the implementation of the Knowledge Building Community (KBC) Project that forms the basis of this thesis.

The Purpose of this Research Project

The purpose of this research project was to develop a constructivist grounded theory that describes and explains the nature of the relationship/s between an alternative mode of program delivery known as the Knowledge Building Community (KBC) Project and the experiences of its pioneer cohort of preservice teachers.

In order to understand the above this study had an overarching research question “What happens to preservice teachers when they undertake the KBC Project in the Faculty of Education at the University of Wollongong?” This question was posed as a means to achieve the following three aims:

1. To understand the nature of the relationships among the cohort of students, the school-based teachers and the university facilitators

The KBC Project saw the establishment of a triadic relationship between preservice teachers, school-based mentor teachers and university facilitators.
This research project will examine the nature of this relationship and the role each stakeholder played in this three-way venture. In particular close attention will be given to the preservice teachers as they grapple with collaborative learning and problem solving. The KBC Project requires its students to participate in small groups to complete the majority of the assessment requirements. Therefore, how the students deal with the issue of group dynamics will also be explained in this research. This research study will explain the role the mentor teachers played when the students attended the schools. The lecturer's role from expert-who-transmits-facts-to-novices to that of "co-learner", i.e. one who actively facilitates and participates in, the learning and knowledge building of the community will also be explained in this research.

2. To understand the students’ perceptions of what it meant to be pioneers in an alternative mode of teacher education

As pioneers in an alternative mode of program delivery such as the KBC Project, the students who volunteered were unaware of how the traditional "mainstream" program was delivered. As part of the KBC Project in session one 1999 they had been free of certain nuances of university routine (lectures, tutorials, changing and finding rooms, examinations). This meant that when the students returned to mainstream university their perceptions of what they had experienced as KBC students were clearer. These understandings will be examined as part of this research. This research project will also examine how the students felt when they returned to KBC in their second year.
3. To explain what happened to the students as learners in an alternative mode of program delivery in teacher education.

As participants in the KBC Project the students were not attending lectures or tutorials but in fact were receiving their program through Problem-based Learning (PBL). The theory behind this mode of delivery asserts that PBL encourages and motivates students to 'learn to learn' (Duch, 1995). Furthermore this theory argues that PBL challenges students to take responsibility for their education. This study will examine how the students as learners in this situation coped with the rigours of PBL and the differences in program delivery that they encountered in the mainstream program.

For the purpose of this research project, a constructivist grounded theory is defined as theory that has been generated from the data by seeking meaning from both the researcher's and participants' meanings (Charmaz, 2000). Constructivist grounded theory methodology allows the researcher to focus on the study of the experience and those who lived it in their natural and cybernetic settings. In this research project the KBC students are the participants and the natural settings were the KBC homeroom and the school classroom. The use of e-mail and asynchronous chat spaces also became preferred student methods of data collection. As a participant observer and eventual facilitator in the KBC Project this researcher heard countless stories and accounts of experiences from the students involved in the KBC Project. It is therefore the responsibility of this research project to re-tell these stories, interpret and identify their context. As with any human undertaking, there were contradictions in the stories that the students told and this is to be expected. This study will also give voice to those
contradictions. Through these stories, this research will show what preservice teachers value, need and disregard in their quest for a teaching degree.

Rationale for the Study

The literature that is centred on teacher education points to the fact that there are current shortfalls in the preparation of preservice teachers (Louden, 1993; Tripp, 1994; Korthagen & Kessels, 1999). In New South Wales (NSW) alone there have been twenty reviews into teacher education in twenty years, all of which have had similar themes; that teacher education courses are at best problematic, and at worst counter productive.

Two recurrent themes have emerged from the University of Wollongong’s Faculty of Education’s attempts to evaluate the efficacy of its preservice courses. One theme relates to its graduates’ perceptions. Many students reported that they left their course with feelings of being "under-prepared for life in classrooms" and "confused" by what confronted them when they arrived at schools (Grant, 1994). Furthermore, they claimed that when they began teaching they were unable to see connections between what they had studied at university and how it was supposed to be translated into classroom practice. Many of them also expressed concern that they were uncertain about how to create classroom settings which would result in sustained and effective learning for their students (Grant, 1994).

The second theme related to the perceptions of experienced teachers who
supervised third year students in their final practicum experience. The general consensus was that these final year primary education students needed more experience with the day-to-day operation of schools, and how the daily work of teachers relates to the culture of schools and classrooms (Armour & Booth, 1999).

The Background

The phrase 'learning to teach' is easily said yet the literature that is available concerning teacher education suggests that it is a complex process involving a combination of university and practicum experience (Feiman-Nemser, 1990; Britzman, 1986; Goodman in Dobbins, 1986; Zeichner, 1986; Calderhead, 1991; Groundwater-Smith, 1993; McCormack, 1997; Mayer, 1999). University preparation programs for teacher education are many and varied. However, Fullan (1991) states that teacher education courses are similar in that they tend to lack an "overall coherence" (p. 291). Added to this criticism is that the purposes of many of the courses and subjects that preservice teachers undertake are "complex and hazy" (Lanier & Little, 1986; Kennedy, 1990). Hoban (1999) says that because teacher education courses often present a fragmented view of learning this can hinder a preservice teacher's development into a flexible, progressive teacher. He claims that there are two reasons for this. He states that many teacher education courses split the study of learning into independent subjects focussing on psychological or sociological aspects which can lead to a narrow and fragmented view of learning. He goes on to say that the organisation of these subjects is often
based on the delivery of decontextualised, theoretical knowledge that has little relevance for trainee teachers.

The reviews into teacher education over the last twenty years have generated approximately 400 recommendations and conclusions (Ramsey, 2000). Many of these reports along with their accompanying recommendations appear in the 1999 report of the Ministerial Advisory Council on the Quality of Teaching (MACQT); “Identifying the Challenges: Initial and Continuing Teacher Education for the 21st Century” (pp. 9-35). Yet in his report, “Quality Matters”, Ramsey (2000) states that the resulting recommendations had minimal impact. He states that the reasons for their failure stem from the “entrenched interests within the education community which were able to thwart any successful implementation” (p. 28).

We are living in a society that demands that our children be well educated. “A basic education is no longer adequate preparation for life” (Ramsey, 2000, p. 9). In an era when new innovations in teacher education are necessary for classroom preparation, it is important that preservice teachers be equipped with alternative teaching strategies that challenge the telling and rote learning model (Gunstone, Slattery, Baird & Northfield 1993; Brown, Doecke & Loughran, 1997). However, the trend at present in Australia in all spheres of the public sector sees policies and practices being driven by economic messages that address "efficient, effective and economic" practice (Sachs & Groundwater-Smith, 1999). This fiscal policy has seen restrictions placed on the practical component of teacher education. In a society that is demanding that teaching be of the highest quality it is imperative that the “systems of teacher education equip teachers with knowledge and skills
relevant to the needs of the young people who they are preparing for the transition to work and participation in an ever-changing world” (Ramsey, 2000. p. 9).

However, a theme that emerged from research undertaken by Armour and Booth (1999) was that preservice teachers were leaving university with feelings of being under-prepared for the transition to life in the classroom. This was reiterated by the schools that employed them when they reported that a majority of graduates were unaware of how school and classroom cultures even operated (Cambourne, 1998). Beginning teachers were unable to see the relationships between what they had studied at university and how it could be translated into classroom practice that produced effective student learning (MACQT, 1998). Armour and Booth (1999) found that most schools who worked with final year primary education students felt that they needed more experience with the day-to-day operation of schools, and how the daily work of teachers relates to the culture of schools and classrooms. Given that there are a multiplicity of demands that classroom teachers now face teacher education must change.

...what is needed is a new vision of teacher education, a different structure that operates according to a different logic, and players other than the present universities alone.

(Submission from the Faculty of Education, University of Technology Sydney, Ramsey, 2000. p. 50)

In the light of suggestions from many reports that the structure of teacher education needed to change, an alternative model was developed at the University of Wollongong.
The Knowledge Building Community Project

In January 1997 a small group initiated an informal, but searching series of discussions within the Faculty of Education at the UOW. This Reference Group began meeting regularly and negotiating details with the overall intent to explore issues inherent in changing two major aspects of teacher education at the UOW:

- the teaching/learning culture of undergraduate teacher education; and
- the traditional mindset and culture associated with practice teaching/internship in schools.

Given this rationale, the faculty supported a proposal to design a research project that would investigate, as a pilot, an alternative approach to initial teacher education through:

...implementation and evaluation of an inquiry and problem-solving approach such as that used in medicine and the health sciences; and a greater integration of the practical field-based component of the teacher education program with the theoretical.

(Cambourne, Ferry & Kiggins, 2002. p. 2)

Based on this premise the Faculty of Education at the UOW, together with the Department of Education and Training (DET) and the New South Wales Teachers' Federation developed the KBC Project, which ultimately commenced in 1999. Its design was to explore a number of issues that are of critical importance to models
of teacher education in NSW (Ramsey, 2000. p. 57). The KBC is significant because its design offers students the chance to work and learn in a context-specific environment. Cambourne (2000) states that:

…it is possible to reorganise the knowledge bases of undergraduate teacher education subjects so that they are more integrated with school and classroom culture, and therefore more relevant, more meaningful, better appreciated by student teachers, with less duplication across subject areas (Cambourne, in Ramsey 2000. p. 57)

This approach as identified by Cambourne is consistent with the directions identified throughout the Ramsey report (2000) as necessary to improve the quality of initial teacher education. The KBC may produce beginning teachers who are confident and have the ability to tackle problem solving and collaboration. The KBC process relies on group and teamwork skills, qualities that will not go unnoticed in the school environment. With the multiplicity of demands that are being placed on teachers today the ability to be an effective member of a team must surely be seen as an added bonus by an employer.

Although a KBC model had been explored for students in schools it had not yet been explored in teacher education. For the purpose of this project the definition of a KBC proposed by Hewitt, Brett, Scardamalia, Frecker and Webb (1995) was adopted. They proposed:

A Knowledge Building Community is a group of individuals dedicated to sharing and advancing the knowledge of the collective. What is defining about a Knowledge Building Community is a commitment among its members to invest its resources in the collective pursuit of understanding. (p. 1)
In order to effectively initiate a repositioning of teacher education delivery from a ‘campus-based-lecture-tutorial’ mode to a ‘problem-based-learning-within-a-school-site’ mode, the KBC in operation at the UOW was underpinned by three learning principles. These three underlying learning principles of the KBC are Community Learning, School-Based Learning and the vehicle which drives these two sources of learning is the facilitation of Problem-Based Learning.

- Community Learning (CL): This is achieved through the sharing of ideas and experiences with other community members, these being the preservice students themselves, the facilitators (university lecturers), and school-based teachers;

- School-based learning (SBL): is achieved through participating in the school context over a regular period of time. An important principle in the pilot has been to shift the approach in the practicum component from supervision to mentoring and;

- Problem-based learning (PBL): this is the notion of a curriculum created around a version of problem-based learning designed for use at the University of Wollongong. The use of PBL will enable students to engage in group discussions and data collection to address real life problem scenarios found in school settings. The use of PBL in teacher education places professional practice at the center of the student’s learning, which encompasses the learning of the student teacher and the mentor.

Each of these underpinning principles of the KBC Project will be taken up in more detail in Chapter Four of this thesis.
The Setting

This research project took place at the University of Wollongong in New South Wales, with preservice teachers enrolled in their first and second years of a Bachelor of Teaching Degree. The Bachelor of Teaching is a three year degree for the preparation of Primary (Elementary) school teachers. The 1999 KBC class was made up 22 students. The age of the students ranged from 18 years to 45 years and gender composition was three males and nineteen females. The students were provided with their own homeroom and six computers, all of which had Internet access.

The students undertook their school-based learning component at four public schools located across Wollongong. All four schools catered for children from Kindergarten to Year 6 i.e. the 5-12 years age bracket. The schools provided the setting for the KBC students to apply problem solving and practise teaching. However, as a direct response to the research that initiated the KBC Project the schools also provided the students with the opportunity to explore the culture of the school, i.e. how a school does business, and how it operates on a daily basis. At each of the school sites there was a school coordinator and two or more mentor teachers who had volunteered to be part of the pioneer KBC Project in 1999.

The Research Journey

The data for this thesis were collected during the phases illustrated in Figure 1.1. It was a journey that lasted approximately 18 months and one that oscillated
between the two modes of delivery that the preservice teachers experienced in this
time frame, i.e. the KBC Project and the mainstream mode. The mainstream mode
at the UOW refers to the traditional format of mass lectures and tutorials. The
KBC Project was operational when funding was available for students to
undertake school based practice teaching. Hence, a KBC mode was in sessions 1,
3 and 6 of the three year Bachelor of Teaching Degree, and a mainstream mode in
sessions 2, 4 and 5.

![Research Journey Diagram](image)

Figure 1.1: The Research Journey

**Limitations and Delimitations**

The KBC Project in 1999 comprised of twenty-two preservice teachers who were
part of the 1999 first year primary education cohort enrolled at the University of
Wollongong. This resulted in a delimitation because the data was only collected
from one cohort but the amount of data generated with only twenty-two focus
students through observation, surveys and interviews was extensive.

The major limitation in this study was the decision to end the data collection
phase where it did (the end of Session One 2000). The decision to stop the data
collection was not easy but more a case of pragmatism. A researcher could follow this group of students to the end of their degree, or into their first year/s of teaching. The reason to cease data collection at the end of the students' second rotation of KBC was dictated by the fact that there was a full twelve months before the students were scheduled to return for KBC Three and the subsequent conclusion of their degree. The time limit imposed on this doctoral study did not allow the researcher the luxury of following the students for a third year.

**Researcher Bias**

In order to obtain the personal reflections and anecdotes that became part of this doctoral study, rapport was established and maintained with the students. Without their rich and sometimes personal stories, the story of the KBC could not have been told. In qualitative research, the nature of the relationship between the researcher and the research subject can often be controversial. In order to obtain the necessary data, rapport was established between this researcher and the KBC students. Glesne and Peshkin (1992) state that “rapport is often used interchangeably with friendship” and often the line between the two is hard to distinguish. In order to maintain the distinction it was necessary to always remember the purpose of the rapport i.e. the research. Zigarmi and Zigarmi (1978) suggested that friendship should be avoided with research participants. Such a directive is hard to follow. It was critical to maintain an open access with the students and the danger of losing objectivity was real. However, the nature of the
research dictated that this researcher was required to get to know the students. The work of Hansen (1976) challenges the concern of objectivity. He stated:

That I did not remain fully detached from the flow of Danish life might be seen as a failure in my role as objective analyst. Yet to understand the subtle dynamics of Danish behaviour required as detailed a knowledge of the individual Danes as I had the capacity to acquire. Access to this information was made possible by friendship, and once established that relationship imposed standards of behaviour at least as compelling (to me) as the rules of my discipline.

(pp 131-132)

Like Hansen (1976) a friendship was established between the students and this researcher throughout 1999. It should be reiterated at this point that at no time was the purpose to my being in the same place as the students ever hidden. Observation, interviews and e-mail correspondence verified the stories that the students shared.

In 2000 when my dual role of KBC facilitator and researcher was assumed, it became difficult to sustain the relationship that had been created during 1999. It became important to assume a new professional stance. At first the students were wary of this new role but within a few weeks the notes and e-mails started once again to arrive. Although the style of face-to-face contact had changed and it was no longer possible to sit and share all the stories, the students still valued the KBC Project and it was for that reason that they wanted their story to be told. This research project was still the vehicle for that story to be shared with the wider community. Just as I had had to assume 'two hats' it soon became obvious that
the students were able to do the same. The ability of the students to be able to
differentiate between the role of student and research participant added to the
uniqueness of this research project.

An Outline of the Remainder of this Thesis

The remaining eight chapters of this thesis are arranged as follows:

Chapter Two aims to identify and review the research literature pertaining to past,
(arranged in chronological order), present and innovative models of teacher
education. This chapter then looks at the perceived problems that have plagued
teacher education before looking at the processes and structures needed to bring
about change in teacher education.

Chapter Three is an extension of the literature review commenced in the previous
chapter. This chapter deals with the literature that is specific to the research
project, i.e. the KBC Project. This chapter takes into consideration community
learning, problem-based learning and school-based learning, which are the three
underlying tenets of the KBC Project.

Chapter Four addresses the research design and the methodology employed.

The findings of the research along with the subsequent discussion of them follow
in a series of three chapters.
The aim of Chapter Five is to share with the reader what happened when the KBC Project was implemented at the UOW in 1999. This chapter addresses what happened to the students as they undertook the KBC Project. It will address and discuss the main issues that arose but it must be stressed that it does so from the perspective of the students.

Chapter Six addresses and analyses the experiences of the students as they moved into the mainstream mode of teacher education conducted at the UOW, in the latter half of 1999.

Chapter Seven reports the final phase of this research project and again the students and their experiences are the focus as they return as second year education students undertaking their second KBC rotation.

Chapter Eight focuses on the development of a constructivist grounded theory that emerged as a result of seeking meaning from the experiences of the students. It then compares and contrasts the findings with past models of teacher education.

Chapter Nine suggests implications from the research for sustaining a social structure for a KBC model and makes recommendations from the theory proposed in Chapter Eight. The chapter also looks at several recommendations and areas for future research and reflections on the research process.
Summary

This research project focused on exploring the students’ experiences during an alternative mode of teacher education delivery that was implemented at a regional university in NSW. The grounds for attempting an alternative mode for teacher education were drawn from the problems identified as plaguing and continuing to plague teacher education both within NSW and at the local level. The primary function of the remainder of this thesis is to report on what happened to the pioneer cohort of students as they took part in the KBC Project and to develop a constructivist grounded theory from the findings.
Chapter Two: Review of Literature

Introduction

The preparation of teachers and current teacher education programs according to Tripp (1994) have not stood up well to public scrutiny. He says that many people, particularly teachers, administrators, and governments, believe that current teacher education practices are an inadequate preparation for teaching. Teacher education in many tertiary institutions throughout the world is under pressure (Korthagen & Kessels, 1999) and it has evolved to the point where "the professional school's prevailing conception of professional knowledge may not match well with the actual competencies required of practitioners in the field" (Schön, 1987, p. 10).

This mismatch discussed by Schön (1987) may in reality reflect the ambiguous and complex nature of teaching as it involves the acquisition of a wide range of skills. Teaching requires judgement, appropriate action and the capacity to reflect and revise decisions on the basis of observations and insight. Learning to teach means gaining theoretical and practical knowledge along with the development of interpersonal skills (Furlong & Maynard, 1995). The associated problems of conventional teacher education programs have been identified by Louden (1993) as collisions between university-based theory and school-based practice. He lists hit-and-run supervision by university staff who have no connection with the
student’s development as a teacher, and sink-or-swim supervision by cooperating teachers who are unwilling (or unable) to help students bridge the gaps in their knowledge between theory and practice.

The development of teaching skills is complicated by the fact that often the knowledge that may be most critical for an individual beginning teacher is identified during preservice teaching experiences, but is seldom fully developed in subsequent preservice practicums (Barnes, 1989). Fullan (1993a) says that there is a widely held misconception that teaching is not all that difficult. As a result of this misconception, it is a common belief that education faculties attract only the students on the lower end of the academic scale (Sarason, 1993).

The challenge, therefore, for teacher educators, is to create programs that will prepare the beginning teacher for the intricacies of life in the classroom. The transformation of students to teachers is a combination of complex events, which needs to take place in both universities and schools. Hannan (1995) argues that the teaching profession requires highly trained teachers at degree standard who have had such a balanced training.
Towards a Competent Beginning - The Aim of Teacher Education

The aim of any teacher education course is to produce competent beginning teachers. However, it must be reiterated that teaching is not easy; it is a combination of skilful activity that demands professional attention. Further, teaching is an activity that requires life-long learning and continual improvement and the effective teacher, according to Barry and King (1998), will be the person that maintains and understands this. There has been a traditional approach in teacher education research to establish what preservice teachers regard as effective teaching (Good & Brophy 1987; McCullough & Mintz, 1992; Kagan & Tippins, 1992; Reynolds, 1992; McDermott, Gormley, Rothenberg & Hammer, 1995; Wilson & Cameron, 1996; Barry & King, 1998). Caution should be applied to any 'list' that attempts to define what it is that an effective teacher does. As previously stated, teaching is a conglomeration of skills and any list of traits should not be seen as a prescription but merely as description. In New South Wales the Department of Education and Training (1999) proposed a model of seven attributes for effective teachers.
This model, according to its designers (Brock & Mowbray, 1999), contains seven interrelated and interdependent elements upon which any construct of professional teaching in New South Wales might be based. They add that any attempt to isolate or to treat these attributes as discrete entities would be counterproductive. It was suggested that this model could be applied to the full range i.e. from beginning to experienced teachers with skills ranging from "satisfactory to superb" (p. 8). These suggested attributes are in themselves complex and could be argued as unrealistic for the beginning teacher to master from the outset of his or her career.

The Effective Teaching Model proposed by the NSW DET should for beginning teachers be seen as a goal that they need to work towards. It is impossible and unrealistic to expect that beginning teachers would be masters of the content of their subjects, experts in the art and science of teaching or exemplary in their
management of student behaviours. It is however, feasible to suggest that the competent beginning teacher would be committed to their students and leaders in their learning community i.e. the classroom. Beginning teachers should be reflective practitioners and certainly should embody the qualities of an educated and upstanding citizen.

Student teachers have stated that in order to be a competent beginning teacher they need to have qualities such as caring, personal, psychological and social growth, compassion, patience, nurturing and imagination (Brousseau, Book & Byers, 1988; Weinstein, 1989; Mahlios & Maxson, 1995; Wilson & Cameron, 1996). With experience the beginning teacher's concerns shift from these "motherhood statements" to emphasise classroom management and by the fifth year of service are usually centred and focused on instructional and management techniques (McCullough & Mintz, 1992). Therefore the effective teacher is seen as one who can combine management, content knowledge and interpersonal skills (Abbott-Chapman, Hughes, Holloway & Wyld, 1990; Hughes, 1994). From the research it can be determined that these attributes or qualities of effectiveness increase with experience in the classroom setting. Therefore a major function of teacher education is to prepare beginning teachers to understand that attributes such as all those suggested by the NSW DET develop over time. Teacher education needs to prepare beginning teachers for the reality of the classroom and equip them with the basic skills necessary to manage in their first years of teaching. Teacher education needs to maintain the empathetic and humanistic concerns that preservice teachers bring to their teacher education courses. In
conjunction with this empathy for the student the preservice teacher needs to understand that, with time, it can be supplemented by the managerial and technical expertise associated with the craft of teaching (Wilson & Cameron, 1996).

Models of Teacher Education Programs

If the aim of teacher education has at its basis the production of effective and competent teachers, the process of how teachers learn or have learnt the science and art of teaching needs to be examined. Traditional models of teacher education used throughout the world are very similar and have tended to focus on what teachers need to know and how they can be trained (Carter, 1990; Diamond, 1991). While there is no single base for teacher education on which everyone agrees, the body of knowledge from which teacher educators can draw when formulating an effective curriculum is substantial (Barnes, 1989).

Central to the most common teacher education models are three basic components: academic preparation in the subjects or disciplines that the preservice teacher will teach when qualified; theoretical foundations of professional education; and the student practicum or teaching in some form of internship (Diamond, 1991). Tripp (1994) however, sees teaching as comprising of more than the above three tenets. He argues that teachers are expected to make learning relevant and interesting to pupils through such means as developing curricula to suit particular needs, individualise teaching, assist personal
development, use affirmative action with disadvantaged minority pupils, involve the community, and in many situations take responsibility for the provision of basic nutritional and hygiene needs. As a result, preservice teachers need to learn a great deal more than the traditional, often narrow curriculum that is offered by many universities.

All teacher education is a form of ideology. Each program is related to the educational ideology held by a particular teacher educator or teacher education institution, even though the relationship may not be made explicit. There is no such thing as a value-free teacher education just as there is no such thing as a value-free education for children.

(Spodek, 1983, p. 3)

Since the introduction of compulsory primary education there have always been major trends identifiable in teacher education. These trends have dominated the way in which prospective teachers were taught their future craft. Teacher preparation began early in the nineteenth century and since then has always been dogged by controversy and debate over the methodology used in it.

**Traditional Models of Teacher Education**

The earliest trend in teacher education was a straight apprenticeship model where teachers learned teaching in schools by teaching at reduced rates of pay whilst under the supervision of more experienced teachers. Teachers were given accreditation when they were deemed competent by the school Inspectorate (Tripp, 1994). Since the abandonment of this model there have been at least five
models that have dominated the discourse of debate in teacher education. These traditional models of teacher education are: behaviouristic, competency-based, personalistic, traditional-craft, and inquiry-orientated teacher education (Zeichner, 1983). The following (Table 2.1) is a summary of these five teaching models. The table highlights the basic composition of each model. Following Table 2.1, each model will be examined with reference to the available literature.

<table>
<thead>
<tr>
<th>Model</th>
<th>Fundamental foundation</th>
<th>Emphasis</th>
<th>Reflection encouraged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behaviouristic Teacher Education Model (BTE)</td>
<td>• Positivistic epistemology</td>
<td>• The observable development of the skills of teaching</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• Behaviouristic psychology</td>
<td>• Teaching is viewed as a science</td>
<td></td>
</tr>
<tr>
<td>Competency-based Teacher Education Model (CBTE)</td>
<td>• Compartmentalises the act of effective teaching</td>
<td>• That there are certain goals and tasks to be learned</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• That learning teaching can be achieved by watching</td>
<td>• Teaching is viewed as a science</td>
<td></td>
</tr>
<tr>
<td>Personalistic Teacher Education (PTE)</td>
<td>• Preservice teachers were taught a set of classroom strategies that they learned and applied</td>
<td>• PTE emphasised the reorganisation of perceptions and beliefs over mastery of teaching skills.</td>
<td>Yes - Only since 1991 when PTE has been reinvestigated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Emphasised the need to create emphatic and caring relationships with students.</td>
<td></td>
</tr>
<tr>
<td>Traditional-craft Teacher Education (TCTE)</td>
<td>• Teaching is a craft</td>
<td>• Preservice teachers acquire knowledge about teaching by trial and error</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>• The preservice teacher is seen as an apprentice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The preservice teacher is a passive recipient of knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inquiry-orientated Teacher Education (IOTE)</td>
<td>• The development of inquiry about teaching</td>
<td>• Critical inquiry is a necessary supplement to teaching skills</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>• Preservice teacher is an active agent in their teacher training</td>
<td>• To prepare teachers who have skills to do and then analyse what they are doing in terms of its effect on children</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Focuses on everyday classroom life</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.1 Five Models of Teacher Education
The Behaviouristic Teacher Education Model

Behaviouristic teacher education (BTE) is perhaps the most influential of general approaches to the education of prospective teachers. Its basic foundation rests within “positivistic epistemology and behaviouristic psychology” (Zeichner, 1983, p. 4). The emphasis of BTE rests on the development of the observable skills of teaching. These skills are related to pupil learning. Kliebard (1973) states that BTE has been present in one form or another since at least the beginning of the century. The emergence of competency-based teacher education (see below) in the 1960’s is perhaps one of the most noted derivatives of BTE.

At the core of BTE are the “knowledge, skills and competencies” that are taught to preservice teachers. The skills taught are considered to be the most relevant to the teaching role and assessment of them is measured by performance at a specified level of mastery. Underlying BTE is a metaphor of "production", a view of teaching as an “applied science”. The teacher therefore, is the executor of the laws and principles of the science of effective teaching (Kliebard, 1972; Tom, 1980a). BTE is not concerned with the fact that quite different motives or the development of the teacher as a person may govern the same behaviour. Also the necessity to reflect on one’s own practice is not a feature of this model.

In BTE the skills that are prescribed for preservice teachers to master are determined in advance and are limited in their depth. Decisions about which skills should be mastered are influenced by research about effective teaching skills. In
this model the preservice teacher is merely a passive recipient of this professional knowledge and hence plays “little part in determining the substance and direction of his or her preparation program” (Zeichner, 1983, p. 4). In this mode the primary concern is to ensure the development certain skills in the performance of a pre-determined task. Whether this skill is appropriate, relevant or worthy of pursuing in the given context is not considered.

The Competency-based Teacher Education Model

The notion of competency-based instruction emerged from the emphasis on goal-orientation and individualisation. The word ‘competency’ was chosen to indicate an emphasis on the “ability to do” and the term competency-based became the designation for an educational approach (Houston & Howsam, 1972). Competency-based teacher education (CBTE) evolved as a response to critics of teacher education such as Joyce and Clift (1991) who stated that the preservice training being offered was “a theoryless, pragmatic frame of reference” (p.9). Joyce and Clift (1991) advocated a competency or performance-based approach for preservice teacher education that compartmentalised the acts of effective teachers and then applied systems approaches so that the effective teachers were used as models to train beginning teachers. It was stressed however, that the need for an academic knowledge base was essential. CBTE centred on the specification of competencies that teachers should acquire in order to perform certain tasks (Diamond, 1991). The competencies identified were related to three general areas: their knowledge, their teaching behaviour and pupils’ payoff-knowledge. CBTE
as a teaching model met with criticism because of its limited philosophical and knowledge base.

Popkewitz, Tabachnick and Zeichner, (1979) believed that the creation of CBTE was a direct response to the research of the day that attempted to discover a deductive system of scientific laws, which could then be used to predict and control teaching and learning. Popkewitz et al. (1979) found that despite numerous efforts by researchers they could not find or identify the actual processes of teacher education. A teaching science theory did not develop from the accumulation of behaviouristic data (Diamond, 1991). It became obvious that mastering the skills of teaching went far beyond routines and repetition. Teaching is a humanistic craft and teachers therefore must be acknowledged as unique and intentional beings not programmable objects.

The Personalistic Teacher Education Model

Personalistic teacher education (PTE) approaches are significantly different from the behaviouristic and competency-based teacher education models. Central to these models was the notion that preservice teachers should be taught a specific repertoire of classroom strategies, which they then learnt and applied. PTE argues that preservice teachers develop individually and that in their teacher training they must be helped to formulate personal agendas and a keen appreciation of the needs of others. The underpinning metaphor of PTE is one of organic growth rather than of mechanistic functioning (Kliebard, 1983; Diamond, 1991).
Advocates of PTE contend that the content of a teacher education program should be largely based upon the self-perceived needs and concerns of the preservice teachers (Zeichner, 1983). PTE focuses on the uniqueness and dignity of the individual to produce an idiosyncratic conception of teaching and learning (Joyce, 1975). PTE accentuates and seeks to promote the psychological maturity of preservice teachers and emphasises the reorganisation of perceptions and beliefs over the mastery of specific skills (Zeichner, 1983). PTE places emphasis on creating empathetic and caring relationships between equals rather than the standardisation of teacher competencies and learner outcomes. Studies undertaken in Great Britain by Her Majesty’s Inspectorate of Schools (HMI) and the Department of Education and Science (DES) found that the personal qualities of teachers were often the decisive factor in their effectiveness and that teacher personality was as important as specific knowledge and skills (Diamond, 1991). Critics believed that this was also the major weakness of PTE as it had the capacity to produce eccentric behaviours.

Combs (1974) believed that a teacher education program that defined precisely the behaviours that it wanted preservice teachers to reproduce was the surest way to destroy the effectiveness of the teachers. He therefore supported and promoted the humanistic perspective in arguing that effective teacher education is a highly personalised relationship. This relationship is dependent on the preservice teachers’ development of appropriate systems of beliefs, which lead to greater psychological maturity. Educating “effective teachers” involves promoting their “becoming” or their personal discovery rather than training them precisely how to
teach. According to this model of teacher education it is a form of adult development, rather than a process of teaching someone how to teach.

The concern with PTE is as much with the quality of experience and with the meanings of behaviour as with the outcomes of behaviour, and it is not assumed that similar behavioural expressions reflect similar meanings and intentions.

(Bussis, Chittenden & Amarel, 1983)

Although student teachers are seen here as active agents in their own teacher preparation, the problem as represented by Bussis et. al. (1983) rests with the fact that because PTE concentrates on personal growth it is difficult to provide for the appropriate shifts in perceptions and meanings. In the PTE model competence is equated with psychological maturity and preservice teachers are encouraged to find their own ways to function as a teacher. Success within the PTE model is measured primarily in terms of effects upon individuals and not in terms of effects upon social systems.

However, PTE was reinvestigated as there was a growing movement that agreed that a balance between action, reflection and human growth was the missing link in teacher education (Diamond, 1991). Dewey (1938) claimed that an emotionally engaging experience must be followed by reflective analysis if qualitative changes in growth and development are to occur. Diamond (1991) stated that because knowledge is perceived as emergent and ever-changing it is the teacher’s essential task to learn how to create knowledge and not merely to receive it. Thus, teacher education for this to occur would need to become learner-centred, problem-
Chapter Two - Review of Literature

orientated and hypothesis generating. The challenge for contemporary advocates of PTE is to personalise the mechanisms of teacher education in order to take account of the human beings involved (Diamond, 1991).

The Traditional-Craft Teacher Education Model

The fourth model of teacher education is referred to as Traditional-Craft Teacher Education (TCTE). This model works on the premise that teaching is based upon a conception that equates teaching as a craft and of teachers as crafts-persons. This model views the preservice teacher as an apprentice. In 1990, Great Britain re-established the use of the apprenticeship model this orientation had few proponents because of the dominance of “behaviouristic” conceptions of teacher education and because of attempts to “professionalise” the occupation of teaching through the codification of knowledge about effective teaching practices (Tom, 1980b). As in the model of the nineteenth century, preservice teachers acquire knowledge about teaching largely by trial and error relying on the “wisdom of experienced practitioners” (Floden & Lanier, 1979). Zeichner, (1983) states however, that this knowledge is tacit and not amenable to the kind of specification that is attempted in “behaviouristic” approaches such CBTE.

Tom (1980b) defines crafts as elaborate sequences of skills that the crafts-person learns how to routinise and mastery of these crafts does not necessarily equate to being a competent crafts-person. Teaching is a complex activity composed of a sequence of activities Tom (1980b) referred to as “inexhaustive rule structures”:
The application of routinised skill sequences to practical problems may fail to bring about desired results. Since rule structures are inexhaustive, judging what should be done through a careful analysis of the immediate situation is of key importance as is the capacity to carry out whatever plan of action the analysis indicates is most likely to succeed. (Tom, 1980b, p. 318)

Consideration of this viewpoint highlights the opinion that mastery of certain skills does not guarantee that the preservice or novice teacher will be able to be considered an effective teacher, who is capable of making proper judgements about spontaneous human predicaments.

A major concern with this model is that, as in the behaviouristic paradigms, the preservice teacher is again a passive recipient in the learning process. The preservice teacher in this model has little control over the substance or direction of his or her teacher preparation program.

A master - apprentice relationship can be considered as a vehicle for transmitting “cultural knowledge” from good teachers to novices (Zeichner, 1983). Educators are reluctant to affiliate with this model, yet when examined closely it underpins typical student teacher practicums. During their placement student-teachers are typically moulded by experienced supervisors to fit the particular school environment and the preservice teacher complies by acquiring a “temporary teaching style” in order to get a passing grade (McIntyre, Hagger & Wilkin, 1983, p. 77). One of the major issues that Field and Field (1994) discovered was the power that supervising teachers had over preservice teachers. Preservice teachers
were powerless against the forces socialising them into the school context. The preservice teachers entered schools with idealism and enthusiasm but soon realised that to gain a passing grade for their practicum they needed to surrender their autonomy and independence (Field & Field, 1994). This research agrees with Scheffler’s findings that learning the skills does not equate to competence. What it demonstrates is the vulnerability and forced compliance of the apprentice to please the master. Although “field” experience is surrounded with much rhetoric proclaiming its value, Dewey’s (1904) characterisation of this field experience as an “apprenticeship” is the modal pattern that operates in the majority of teacher training institutions.

The Inquiry-Orientated Teacher Education Model

Inquiry-Orientated Teacher Education (IOTE) is the final model of teacher education to be examined. The focus of this model is on the development of inquiry about teaching and the contexts in which it is carried out. This model is also concerned with the development of the skills associated with critical inquiry. This focus does not imply that teaching skills are not important; it suggests that critical inquiry is a “necessary supplement” to the ability to carry out teaching tasks (Zeichner, 1983).

Wehlage (1983) reports that there have been many attempts made to promote the development of IOTE in the United States. Zeichner (1983) cites the following proposals: “teacher innovators” “teacher scholars”, “teachers as inquirers”,

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“teachers as action researchers”, “teachers as participant observers”, and “self-monitoring teachers”. These proposals to promote IOTE all have the common aim “to prepare teachers who have the skills to do and the inclination and skill to analyse what they are doing in terms of its effects upon children, schools and society” (Zeichner, 1983, p. 6).

This model of teacher education views the preservice teacher as an active agent in his or her own teacher preparation. IOTE works on the assumption that the more a teacher is aware of his or her actions and the reality of these actions on the lives of those whom he or she comes in contact, then the greater the likelihood that as a teacher they may be able to control or change both actions and constraints.

While not naively ignoring the role that both internal and institutional constraints play in shaping a teacher’s actions, advocates of this position express a concern for helping prospective teachers assume a greater role in shaping the direction of educational environments according to purposes of which they are aware and which can be justified in moral and ethical as well as instrumental terms.

(Zeichner, 1983, p. 6)

IOTE encourages teachers to focus their attention to the reality of everyday classroom life. Given this notion of “objectification” (Zeichner, 1983) of everyday reality preservice teachers need to use the process of inquiry to question the role of a teacher, the tasks of teaching and schooling. As they view and question the setting in which they work the ideal is that they recognise the origins and consequences of their actions more fully. Zeichner (1983) states that if this model
is effective in preservice teacher education, several questions should begin to emerge and become of central importance to prospective teachers. He lists the following examples: What knowledge should be taught and to whom? How should a teacher allocate time and resources among different students? To what extent should the personal knowledge that students bring to school be considered a legitimate part of the school curriculum? How much control do (and should) teachers exert in determining what is taught, how it is to be taught, and how it is to be assessed?

A closer examination of these sample questions reveals that it is reflection that this model is attempting to have preservice teachers practise. Dewey (1933) stated that “reflective action” helps teachers to examine the moral, ethical, political and instrumental issues that are embedded in everyday thinking and practice. Meeting the technical mastery of teaching skills is not the primary concern of this teacher-training model; its focal point is teaching the skills of inquiry (e.g. observation and questioning skills). Through valid questioning teacher educators and their students determine which educational goals and experiences coupled with institutional arrangements are best suited to form a just and equitable teaching environment. Berlak and Berlak (1981) best summarise the underlying principles of this model:

The proper role of the formal education of teachers is to help persons develop their capacities to see their classroom behaviour in the perspective of their culture and time, from the point of view of historical and contemporary others, thereby clarifying for themselves
and others the alternatives for action. The structural features of institutions for the education of teachers, including staffing policies, selection of knowledge, arrangement of learning environments and the pedagogical strategies of the instructors, are means towards this end. The entire program, all course and practical experiences, should provide the aspiring and experienced teacher with access to persons who can help initiate and sustain a process of critical inquiry.

(Berlak & Berlak, 1981, p. 252)

These five traditional approaches have tended to dominate teacher education. Each model has certain orientations and characteristics and these traits tend to crossover into the most specifically designed program (Zeichner & Tabachnick, 1982; Goodman, 1983). The purpose of identifying each model’s orientation was to demonstrate the focus of each. The five models examined had some similarities as well as differences. The BTE and CBTE models had the similar concern that teaching is a science, whereas TCTE and PTE were concerned with content knowledge. The traditional model of PTE emphasised the reorganisation of teacher perceptions and IOTE looked at fostering a form of inquiry about teaching. These models also placed an emphasis on everyday classroom issues and saw that developing caring relationships with students as a necessary component of teaching. Of notable difference is the emphasis of the IOTE model that saw the preservice teacher as an active agent in their teacher training compared to the CBTE and TCTE models, which situated the teacher education students as passive recipients of knowledge.
The ongoing criticism of teacher education has meant that the models previously cited have themselves undergone restructuring and re-naming in an attempt to appease a more contemporary audience. Zeichner and Liston (1997) suggested that the following references are more in keeping with current trends. They state that the traditional-craft paradigm should be replaced with ‘academic paradigm’. This new paradigm is defined as containing more liberal arts education that is supplemented with an apprenticeship in a school. The term ‘social efficiency’ has replaced behaviouristic; ‘developmentalist’ is the new term for personalistic and ‘social reconstructuralist’ is favoured for the inquiry model of teacher education.

The names of the models may have changed yet the criticisms that surround them continue. Despite the decades of reform and implementation of teaching models as those shown above teacher education is criticised for ignoring the voices and needs of preservice teachers, providing and promoting an unrealistic view of teaching, and perpetuating the transmission model of teaching as telling (Cochran-Smith, 2001; Kagan, 1992; Korthagen, 2001; Olsen & Osborne, 1991; Russell & McPherson, 2001; Smith & Shapson, 1999; Vann, 1999).

Cochran-Smith (2001) states that in an effort to address the question of quality and content in traditional teacher education programs, reform movements in recent decades have focused on discovering the attributes and strategies of effective teachers and on defining a knowledge base for teaching. The traditional models of teacher education that continue to use non-collaborative environments and limited communication and coordination, reinforces and perpetuates the

**Innovative Models of Teacher Education**

Russell and McPherson (2001) state that innovative teacher education programs of reform begin with the understanding that entering teacher education is “not the equivalent of switching on the ability to think like a teacher” (p. 5). They go onto say that preservice teachers must first comprehend and question the learning to teach process from within their own limited and personal perspectives created by their years of observing teachers.

Innovative programs in teacher education such as: Project Opportunity, the Santa Cruz New Teacher Project, the Contextual Teaching and Learning Project, the High Quality Teacher Education Project at the University of Texas (El Paso) stemming from the United States of America and the Realistic Approach to Teacher Education at the IVLOS Institute of Education in Amsterdam are just some recent examples.

Table 2.2 is a summary of these teacher education innovations.
### Project Opportunity

Project Opportunity commenced in 1991 and is a partnership among Iowa State University (ISU) Faculty, practicing educators and ISU Students. It is designed to improve the teaching and learning of preservice teachers. Project Opportunity incorporates a student cohort model as well as extensive field based experiences. The use of the cohort groups according to Brannan and Reichardt (2001) provides

<table>
<thead>
<tr>
<th>Model</th>
<th>Where</th>
<th>Underpinning Design Principle</th>
<th>Fundamental emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Opportunity</td>
<td>Iowa State University</td>
<td>• Student cohort groups&lt;br&gt;• Extensive field experiences</td>
<td>• Cohort groups provide students with a sense of belonging&lt;br&gt;• Collaboration&lt;br&gt;• Encourage commitment to the profession</td>
</tr>
<tr>
<td>Santa Cruz New Teacher Project</td>
<td>University of California – Santa Cruz</td>
<td>• Mentoring of beginning teachers with Faculty and school-based teachers&lt;br&gt;• Focuses on the transition of preservice teachers to beginning teachers</td>
<td>• Learning to teach equals life-long learning&lt;br&gt;• Collaborative environment&lt;br&gt;• Reflection of teaching practice ensures professional development</td>
</tr>
<tr>
<td>Contextual Teaching and Learning Project: A PBL Approach</td>
<td>University of Louisville</td>
<td>• Collaboration with local schools to promote contextual learning experiences</td>
<td>• That teacher education cannot be separated from knowledge of the context in which the phenomenon occurs.&lt;br&gt;• The program’s curriculum is centred around problem-based learning activities</td>
</tr>
<tr>
<td>The High Quality Teacher Education Project</td>
<td>University of Texas: El Paso</td>
<td>• Collaboration and partnerships with schools&lt;br&gt;• Partners contribute to the teacher preparation program</td>
<td>• Increased classroom time&lt;br&gt;• The incorporation of technology with teaching practices</td>
</tr>
<tr>
<td>The Realistic Approach</td>
<td>IVLOS Institute of Education</td>
<td>• An integration of several older approaches; the theory-based approach, competency-based methods and reflection&lt;br&gt;• Emphasis placed on specific concerns questions, and problems student teachers face</td>
<td>• Create suitable learning experiences&lt;br&gt;• Promote awareness and reflection in student teachers&lt;br&gt;• Offer theoretical notions from empirical research&lt;br&gt;• Train students to be proactive</td>
</tr>
</tbody>
</table>

Table 2.2: Innovative Teacher Education Models
the participating students with a sense of belonging and commitment to the profession. The cohort groups are comprised of thirty students who spend four years together at a partner school. The use of extensive structured field based experiences prepares the students for the reality of classroom life and makes for an effective component of the course. However this component also brought with it a series of unique problems that needed attention. McKibbin (2001) found that support for students in field-based experiences must be readily available at the school site and it must be present from the beginning. An arrangement such as this is reliant on collaboration between the academy and participating schools.

Because Project opportunity is a collaborative effort between ISU, selected school systems and preservice teachers, there are according to ISU a number of mutual benefits.

The Project Opportunity Web site http://www.educ.iastate.edu/ci/projop/ (accessed 01/10/02) lists these as:

- greater ownership by participants
- shared decision making;
- opportunity for continual learning;
- respect for diversity;
- increased interchange of ideas/resources/techniques;
- staff development opportunities;
- reconstructed teacher preparation;
• teaching exchanges;
• mutual curriculum development;
• collaborative status for school faculties;
• action research; and
• staff morale development.

The Santa Cruz New Teacher Project

The Santa Cruz New Teacher Project (SCNTP) has been in operation since 1988. The Teacher Education Program of the University of California, Santa Cruz, leads the SCNTP in collaboration with the Santa Cruz County Office of Education and sixteen school districts in the surrounding area.

The SCNTP Web site http://www.newteachercenter.org/NTPoverview.shtml (accessed 01/10/02) states that the program philosophy is based on the following fundamental beliefs:

• learning to teach is a career-long, developmental process;
• support should be responsive to the needs of each new teacher and embedded in every teacher's classroom practice;
• teacher learning best occurs in collaborative environments;
• instructional changes are most likely to occur when teachers assess their practices against recognized professional standards;
• teaching is a continuous cycle of teaching, inquiry into practice, self-assessment, self-prescription, and re-teaching; and
• professional learning must have at its core student learning.
Central to the SCNTP induction model are the partnerships that form between the mentor and the mentee. Mentors meet weekly with each novice for approximately two hours before, during or after school providing mentees context specific support.

In addition, new teachers receive release days for observation of other teachers, curriculum planning, and self-assessment. A monthly seminar series serves as a network where these novice teachers share accomplishments and challenges with peers. Special attention is paid to literacy, language development, strategies for working with diverse student populations, and the needs of English language learners.

The Contextual Teaching and Learning Project: A Problem-based Approach

The University of Louisville has collaborated with local schools to create Professional Development Schools (PDS) these sites are where teacher preparation courses are taught. The program's emphasis is on inquiry, with a commitment to preparing teachers to adopt a problem solving perspective with respect to their practice. As a result the emphasis is on preparing teachers who focus less on "doing it right" and more on understanding what their students need to do in order to learn important content. Faculty staffs encourage the teacher education students to experiment with inquiry-based approaches in their classroom practicum, internship, and student teaching placements. Teacher education students are encouraged to view themselves as learners, to collect data
about their students' learning and their teaching practice, to form critical friendships with their colleagues, and reflect on their own practice through journal writing and continued professional development. These efforts will help graduates to focus on their students' learning rather than their own teaching performance.

**The High Quality Teacher Education Project**

In 1992 the University of Texas at El Paso (UTEP) joined the National Network for Educational Renewal in the United States of America led by John Goodlad. As a result a series of meetings were held between faculty and local schools to examine teacher preparation. Partnerships were created with the schools in which pre-service teachers do their internships. All major stakeholders participated in planning and evaluating the teacher preparation program, including the teachers and school administrators.

In order to prepare innovative teachers it was necessary to strengthen the collaborative partnership and redefine the roles of the university and public school faculties. Both institutions underwent changes in practice. One area in which teacher preparation changed dramatically was incorporating technology with effective teaching practices. Through numerous grants, the classrooms in which the student teachers practice have been outfitted with the latest hardware and software. Each partner school as a result of the collaborative partnership has an average of 100 state-of-the-art computers and related equipment in its classrooms.
Another new component of the teacher preparation program is for preservice teachers to learn how to work with low socio-economic parents. Teacher education students take a course on parent engagement, which requires home visits.

At UTEP, the emphasis is on changing public schools and teacher preparation programs at the same time. Students preparing to be elementary and secondary teachers work in cohorts, take their university classes together, and spend two semesters in the field at Partner Schools under the joint supervision of university faculty and public school teachers who act as clinical faculty. This new approach to teacher preparation is a major paradigm shift, characterised by the following features:

- pre-service teacher education is collaboratively designed and managed;
- teacher preparation is field-based (students undertake a total of 650 contact hours of fieldwork);
- the integration of technology and effective teaching receives high priority;
- effective teaching practices such as problem-based learning, cooperative learning, and computer-based instruction are utilised at the university and at the schools;
- authentic assessment methods are utilised to evaluate student progress; and
- a parent engagement component has been added to teacher preparation.
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Realistic Teacher Education

Korthagen and Kessels (1999) state that the realistic approach goes from practice to theory and that the gap between theory and practice disappears. Thus the emphasis “shifts toward inquiry-orientated activities, interaction amongst learners and the development of reflective skills” (p.7). They go on to say that the role of the teacher educator is important and completely different requiring at least four principle undertakings from the traditional role of the lecturer. They need to be able to do the following:

1. Create suitable learning experiences for student teachers in which these student teachers can develop adequate Gestalts (the way an individual acquires a grasp of their environment) as a base for the next step.

2. Promote further awareness and reflection in student teachers on their experiences, thus developing more elaborate Gestalts and schemata, leading to phronesis. It is often helpful to take one concrete, recently experienced, and relatively short teaching situation as a starting point for analysis that still evokes some concern or question in the student teachers.

3. Offer theoretical notions from empirical research in such a way that these notions at a specific moment for specific student teachers help their phronesis one step further, which means that they start to perceive more in the specific and in similar situations and are able to act upon their heightened awareness.

4. Train the student teachers in acting in a productive manner.

(Korthagen & Kessels, 1999, p. 13)
The Realistic Approach to teacher education focuses on the specific concerns, questions and problems student teachers bring to the academy based on what they have witnessed or experienced in the classroom. As a consequence Korthagen and Kessels (1999) state that the role of the teacher educator requires flexibility to deal with this style of content delivery.

The five models cited previously are considered to be “innovative” because they meet the following guidelines:

- making explicit what teachers actually do and think in the course of planning, implementing, and evaluating their teaching;
- taking candidates’ experiences and concerns as central in discussions that enable them to study their own fledgling practice as they work to see the theory involved in practical decisions; and
- creating collaborative environments within student cohorts, between school boards and faculties, within university departments, and among teacher educators, trained mentors, and candidates.

(Russell & McPherson, 2001, p.5)

In addition to this underpinning criterion these five models have other similarities and differences. Project Opportunity at ISU, the Santa Cruz New Teacher Project at the University of California Santa Cruz (UCSC), the Contextual Teaching and Learning Project at the UOL and the High Quality Teacher Education Project at UTEP all support collaboration between the university and the schools. These
models place this partnership as fundamental to the design of their teacher education innovation. The strengthening of the school-university partnership has benefited the preparation of teacher education students because they are learning in context. This partnership as reported by the UOL emphasises student teachers to focus less on "doing it right" and more on understanding what they need to do in order to learn important content.

The use of cohort groups amongst the students is particular to Project Opportunity but it relies heavily on field-based experiences, which are in turn dependent on collaboration between the faculty and the participating schools. This collaborative feature between the universities and the schools is also a trait at UTEP, the SCNTP at the University of California, Santa Cruz and the University of Louisville (UOL). However, the innovative program at UOL centres its curriculum on problem-based learning activities. The five models cited all share the desire to increase classroom time and experiences however it is the project at UTEP that is also incorporating technology as a means to improve teaching practice.

Reflection based on classroom experiences is encouraged as a component of the SCNTP and the Realistic Approach to teacher education proposed by Korthagen and Kessels (1999). These models have this component inbuilt to provide a means for students to improve their practice based upon their reflections. This action is further supported in the Realistic Approach because the concerns and problems of the students based on their classroom experience acts as a basis for program
delivery. Initial teacher education programs need to provide preservice teachers with the skills, knowledge and attitudes that will help them establish a strong foundation for effective teaching, reflecting on classroom experiences allows teacher education students to discuss and relate to theory what they are observing.

Teacher education program design should be an ongoing process. Feiman-Nemser (1990) states that in terms of professional education all teacher preparation courses need to confront the question of what teachers need to know and how they can be assisted to acquire and develop that knowledge. McFadden and Meyenn (1996) believe that there needs to be a collaborative and collegiate attempt to provide school-based programs for teacher education, where academics work in partnership with teachers in schools to encourage strategic thinking and the development of professional skills in student-teachers. The pressure towards the establishment of more school-based programs is a growing phenomenon stemming not only from teacher education institutions but also from teachers, parents and politicians (Barone, Berliner, Blanchard, Casanova & McGowan, 1996). Goodlad (1990a) stated that the perceived need for preservice teachers to experience more school-based practice was an indication that new graduates were failing to meet the realities of the classroom. Tom (1997) believes that unless teacher educators continually renew their programs through collective practice, their programs gradually ossify and ultimately become disconnected from educational and social institutions.
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Current Issues in Teacher Education

Fragmented Delivery of Content

Prospective teachers enter teacher education with a desire to learn to teach. However, teacher educators have traditionally seen that preservice teachers are gradually introduced to professional content in a moderate and carefully planned manner. The problem associated with this gradualism is that the step-by-step approach rarely stimulates the imagination, nor does it represent reality. Interspersed with theoretical subjects and assignments is the practicum that rarely reflects any material covered at university. Thus the year or semester completed is often viewed by the preservice teacher as disjointed and impractical (Tom, 1997). Hoban (1999) believes that this fragmented view of learning hinders the preservice teachers' development into becoming a flexible, progressive teacher. He claims that there are two reasons for this: firstly, that many teacher education courses split the study of learning into independent subjects focusing on psychological and sociological aspects and this can lead to a narrow and fragmented view of learning; secondly the organisation of these subjects is often based on the delivery of decontextualised, theoretical knowledge that has little relevance for trainee teachers.

To counteract the isolated and disjointed aspects of teacher education, Tom (1997) argues that preservice teachers should spend more time in schools with compression of the theoretical subjects. An adjunct however, to this
recommendation is the warning that because all preservice teachers have spent many years as students in classrooms before commencing their teacher training they will have developed their own images of what it means to teach. This image is formulated from a student perspective; the teacher is viewed “front stage and centre like an audience viewing a play” (Lortie, 1975, p. 62). Lortie referred to this as the “apprenticeship of observation”. Every student has been a member of a classroom audience but, as Lortie (1975) accurately illustrated, as students the preservice teachers were not privy to the “teacher’s private intentions and personal reflections on classroom events” (p. 62).

To balance these experiences Tom (1997) recommends that teacher educators should try to break the apprenticeship of observation quickly and early in teacher education training. The aim is to introduce preservice teachers to the reality of the complexities and practicalities of teaching. Whether or not they see the pedagogical nature of teaching would depend heavily on the demeanour of those who were supervising the experience. Supervising lecturers or classroom teachers would need to use methods of probing student thinking. Simultaneously, it would be necessary to offer explanations for their own teaching strategies. An early teaching experience may prove unsuccessful if it is poorly supervised.

The Practicum

Preservice teachers have traditionally placed a great deal of importance on their time spent in schools (Lasley, 1980; Amarel & Feiman-Nemser, 1988), hence their time spent in schools needs to be beneficial. This period is traditionally
referred to as the practicum. The practicum sees the student teacher placed into a classroom under the supervision of the class teacher. Field and Field (1994) state that the role of the supervising teacher in the practicum essentially amounted to one of “functionalist socialisation”. Webster’s (1993) practicum research conducted through the University of Melbourne showed that replies to questions that related to what constitutes ‘good supervision’ were directed at caring socialising practices. The most common replies from the supervising teachers were:

- making student-teachers feel one of the staff;
- making students feel welcome in the classroom;
- expecting the children to show the same behaviour towards student-teachers as towards themselves;
- modelling and explaining what and why they are doing what is done and;
- discussion and feedback on the student teacher’s work.

(Webster, 1993, p. 47)

The research by Webster (1993) confirmed Partington’s (1982) work which showed that in the beginning of a practicum “there was a flurry of advice and help”, which was characteristically followed by a “tapering off”. Partington’s research also showed that meetings between students and supervisor were brief, in between lessons or interrupted. Field and Field (1994) state that it is the usual case in the student-teacher/supervisor relationship that it is the supervisor who knows and the student teacher who learns. Students rely heavily on their practicum as a
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means of delivering realism to their studies. As such, it should be a rewarding experience for the student teacher. Many practicum experiences however, have not always been positive experiences. Students tended to see themselves as polite guests in the classrooms of their host teachers. Simple tasks and activities were offered as gifts for the teacher and the pupils. Above all however, the student teacher wanted their lessons to go as smoothly as possible with little disruption to their host (Edwards & Collison, 1996). Turney (1994), identified seven interrelated problem areas often associated with the practicum:

1. There is often a disjunction between the aims stated by the university for the student teacher’s practical experience in schools, and what actually happens in the practicum, i.e. a gap between the ideals and the experience.

2. Stated aims of the practicum are too narrow, therefore the experiences for the student teacher are limited.

3. Often the classroom experiences are left to the whim of the supervising teacher and can lead to a haphazardness effect.

4. The supervising teacher’s influence can sometimes be counter-productive, especially if their teaching style equates to an authoritarian, control-centred, conservative, reactionary backward-looking approach to classroom practice.

5. Practicum blocks are not always time-efficient. In a three-week block it is estimated that it takes the student teacher a week to be orientated to the school. Not all of the student teacher’s time is taken up with teaching or observation, and not all of their teaching is supervised. This can be seen as a waste of resources and money.
6. Because students can be given only one or two contexts in which to practice, they are inevitably inadequately prepared for the wide-ranging possibilities in the teaching arena.

7. Because there has been no systematic curriculum of practice teaching, it is hard to demonstrate to university authorities that money has been well spent. (Field & Field 1994, p. 60)

The disjunctions between what happens during the practicum, the ideals of the students and what is taught at university must be addressed. It is not uncommon for the practicum school and the teacher education faculty to operate independently of each other. For teacher education to become more school-based the responsibility for many aspects of teacher education, not just socialising perspectives, will fall to the classroom teacher. Therefore, the role of the supervising teacher needs to change.

**Transition or Reality Shock**

Perhaps of greater concern is the more severe criticism levelled at teacher education in that it fails to prepare its graduates for life in the classroom setting.

The preparation of educational personnel inadequately prepares them for what life is like in real classrooms in real schools and leaves them unable to capitalise on opportunities to be consistent with the primary aim. The preparation of such personnel should begin not with theory or history or research findings or pedagogical technique but with concrete issues of classroom life: the practical, inevitable, action-requiring issues on the basis of which the would-be teacher can judge and utilise theory and research. (Sarason, 1993, p. 137)
The "concrete issues of classroom life" combined with the culture of the school environment are often referred to as "reality shock". Koetsier and Wubbels (1995) state that, having completed their teacher training, beginning teachers experience "reality shock" when faced with the demands of the teaching practice. Veenman (1984) believes that the transition from university to school can be both dramatic and traumatic. Reality or transition shock is the gap between the ideals of the new graduate which were formed during teacher education and the harsh reality of everyday school life.

Reality shock is a somewhat inappropriately used term because it suggests that it is only a very short shock, which one has to pass, like a swimmer who must acclimatise to cold water. In fact, the reality shock deals with the assimilation of a complex reality that forces itself incessantly upon the beginning teacher, day in and day out. This reality must be mastered continually, especially in the first period of actual teaching. (Veenman, 1984, p. 144)

Primarily it is not the fault of beginning teachers that they are overwhelmed when they enter schools because what they have received at university is predominantly theoretical in nature. The theory typically focuses on how to prepare lessons, units, and carry out evaluation. Interspersed with the theoretical component there would have been periods of practice teaching but the literature shows that this rarely relates to the work carried out by the students at university. Wubbels, Korthagen and Brekelmans (1997), state that the three major causes for this transition or reality shock are cognitive-psychological.
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The first cause has to do with the learning process implemented by the teacher education faculty. Research conducted by Scardamalia and Bereiter (1989) shows that prior knowledge plays a powerful role in comprehension and learning. Students in teacher education are no different; they too have preconceptions about learning and teaching but these ideas do not always match those of their chosen teaching institute (Wubbels, 1992). Wahl, Weinert and Huber (1984) demonstrated that preconceptions are resistant to change and this reflects Lortie's (1975) observation that preservice teachers enter teacher education programs with many years of prior educational experience. Research conducted by Stofflett and Stoddart (1994) showed that teachers taught in ways that they themselves were taught. Their research demonstrated that preservice teachers who experienced learning in an active way were more inclined to develop lesson plans that reflected their own learning experiences. The influence of how one is taught is a lasting impression as Huibregtse, Korthagen and Wubbels (1994) demonstrated. Their research showed how experienced teachers still demonstrated a strong relationship between how they were taught and how they preferred to teach. The teachers stated that this was because they had a limited view of the learning styles of their students and therefore tended to project their own way of learning onto the learning of their students.

The second cause for transition or reality shock as identified by Wubbels, Korthagen and Brekelmans (1997) has been named the "feed-forward problem". This can be likened to a Catch-22 phenomenon; preservice teachers resist the theories being offered, citing them as irrelevant, then later in their degree protest
that the same learning theories were not given stronger emphasis (Katz, Raths, Mohanty, Kurachi & Irving, 1981). This situation has been explained thus:

In order to learn anything during teacher education, student teachers must have personal concerns about teaching or they must have encountered concrete problems. Otherwise the fruitfulness of the theory is not clear to them and they are not motivated to study it. In fact, this is nothing more than a concretization of the well known principle that learning only takes place if the learner has some personal goal that is, in the view of this person, served by the learning.  

(Skemp, 1979, in Korthagen & Kessels, 1999, p. 5)

Joyce and Showers (1988) suggest that even if preservice teachers have personal goals and concerns about teaching there still needs to be some form of 'coaching' so that they can connect the theory to their practice in the classroom.

The third cause of the problem of reality shock has to do with the "nature of the relevant knowledge" (Wubbels, Korthagen & Brekelmans, 1997). Once inside a school its culture demands, from its new recruits the attributes of accomplished professionals.

In the teaching profession, beginners are expected to do essentially the same job on their first day of employment as 20-year veterans. In addition, because teachers spend the majority of their workday isolated from their peers, the natural induction process that occurs in most professions (i.e beginners receiving ongoing direction and assistance from other experienced colleagues) is prevented from occurring.  

(Huling-Austin, 1990, p. 535)
A beginning teacher needs quick, efficient and concrete answers to very real problems. These real situations are far removed from the "abstract, systematised and general expert-knowledge" that teacher educators present (Korthagen & Lagerwerf, 1996; Tom, 1997). A criticism such as the above is harsh. To refute this criticism education faculties need to adopt changes to their programs. This is not to say that theory does not have an important role to play. Solomon (1987) strongly believes that theory was definitely of value to practice. She argued that to achieve value and relevance from the theoretical position a two-step process needs to be put into practice. She proposed the following approach:

The first step consists in the building by students of a substantial base of craft knowledge. That is, students start their training in the actual classroom where, with the help of 'mentor' teachers trained to be able to articulate about their teaching knowledge (what they do in specific situations, and why), they build a repertoire of experiences and strategies which can be reflected on (thought about) in context. The second step has as its objective the framing by each student of a '...personal explanatory perspective on a whole domain of strategies: it requires experience and reflection, but also knowledge of a wider kind, and a personal commitment."

(Solomon, 1987, p. 267)

The second step should be carried out in a constructive process of reflection on classroom experience in a peer group situation. Each of these groups would be led by an educational tutor whose role encompasses both that of a facilitator and that of educational instructor. The tutor would be able to provide the background knowledge on learning theories when discussion by the students signalled it was
necessary. The above pattern of teacher education training by Solomon (1987) adheres to a design of conceptual and structural components working together.

It would appear that one of the keys to decreasing the transition or reality shock experienced by beginning teachers is to provide preservice teachers with a teacher education course that will enable them to recognise the link between theory (university) and the realities of practice (school). The establishment of such a teacher education model should therefore eventuate between the two institutions.

The Road to Change

The teaching profession continues to grapple with a codified body of knowledge to base preservice teacher education programs upon (Waghorn & Stevens, 1996). There are problems with the traditional models of teacher education, fragmentation in content, the practicum and the ongoing failure to address the needs of newly graduated beginning teachers. School-based teachers are being constantly faced with broader and more diverse responsibilities; as such their accountability increases (Williams, 1995; McFadden & Hastings, 1997). Smith and Weaver (1998) identified the following factors as being responsible for pressure on the education sector and therefore adding further challenges to the conventional teacher education models:

...changes in the structure and governance of schools, changing expectations of education and schooling by various elements of the middle class, the impact of communication technologies and an ageing teacher and teacher education staff facing monumental cultural shifts. (Smith & Weaver, 1998, p 32)
The common factor defined is that preservice teacher education would improve if there were more school-based experiences offered to student teachers. However, the trend at present in Australia in all spheres of the public sector sees policies and practices being driven by economic messages to be more "efficient, effective and economic" (Sachs & Groundwater-Smith, 1999). What this means is that any reform to teacher education will derive from the teacher education providers and the profession itself, not necessarily the federal government. Despite the rhetoric and concerns about teacher education there appears to be a reluctance to invest more in the education of preservice teachers. This hesitation could stem from the belief that teaching is not difficult (Fullan, 1993a).

Paradoxically, teacher education is under the glare of government attention and 1998 saw the release of several final reports looking at teacher education practice. The report of the National Standards and Guidelines for Initial Teacher Education Project entitled: “Preparing a Profession”, was published. This report stated that a way to work towards common goals, outcomes and standards for initial teacher education was necessary. The second report released in 1998 was The Report of the Review into Higher Education Financing and Policy (the West Report). This second report titled “Learning for Life” looked into the financing of universities. While not specifically referring to teacher education, Sachs and Groundwater-Smith (1999) believe that the tenor of the report stated the need for universities to be more cost efficient and competitive.
The challenge is now to learn to do things differently. Universities will need to review continuously the way in which they go about their business. They will need to be attending more closely than ever before the needs of their various clients, and be more willing and able to respond quickly and flexibly to their diverse and changing needs.

(West, 1998, p. 67)

The third report of 1998 was the Senate Inquiry into the Status of the Teaching Profession, entitled “A Class Act”. This report was supportive of the teaching profession and recognised the need to raise its status. However, particular attention and criticism was levied at initial teacher education programs. The report commented that there were many programs that were of poor quality, which were inappropriate and inadequate in preparing preservice teachers for the profession. In particular it was stated that, “the most trenchant criticism to teacher training related to its practical component” (A Class Act, p. 183).

The three reports mentioned above all point to the need for change in teacher education. These reports were then superseded by further reports in 1999 and 2000 thus raising to twenty the total of reports and reviews into teacher education since 1980. In the 1999 report of the Ministerial Advisory Council on the Quality of Teaching (MACQT), “Identifying the Challenges: Initial and Continuing Teacher Education for the 21st Century”, many of these reports along with their accompanying recommendations appeared. However, the latest of these reviews, “Quality Matters”, prepared by Gregor Ramsey (2000) states that the impact of these reports and the 400 recommendations that accompanied them over the last twenty years were minimal.
The latest in this long line of reviews into teacher education was commissioned by the Minister for Education and Training the Honourable John Aquilina MP. He appointed Ramsey to address the following four issues:

- the quality of teachers and teaching;
- the implications of technology for pedagogy;
- behaviour management in schools and classrooms; and
- the practicum and the professional experience of teachers.

These issues were selected because they succinctly covered the main areas of concern in teaching and teacher education in NSW in 1999-2000. The first point deals with the desire by teachers to have their work better understood and more highly valued by the community. The second issue relates to all the new technologies that are being introduced into the classroom and whether they are being effectively integrated into the curriculum. The third issue addresses parents' concerns who want to know that teachers are well prepared to manage the distractions and various behaviours that from time-to-time prevent learning from taking place. However, it is point four that has particular relevance for this review of literature. It would appear that once again the dominant issue of concern in teacher education is the practical component currently offered to preservice teachers.

I am convinced that the quality of professional practice in classrooms, government and non-government schools and other educational settings, will be improved by reconnecting universities and schools in
initial and continuing teacher education and by strengthening teacher professionalism. ...Unless new approaches are developed in a number of important areas, my belief is that like the twenty previous reviews of teacher education over the same number of years, little will happen as a result of this Review and good ideas will languish.

(Ramsey, 2000, p. 3)

Ramsey (2000) stated that for reform in initial teacher education to take place several factors needed to be encompassed. He went onto suggest the following:

- conceptualising initial teacher education as fitting within a field of study broadly defined as ‘communication’ or ‘knowledge development’, from which not all graduates will necessarily work in schools;
- placing professional experience and related learning at the centre of teacher education so that new responsibilities for preparing competent beginning teachers are defined for teacher educators, other disciplines in the universities, teachers and principals;
- designing the teacher education curriculum so that it illuminates and is illuminated by professional experience, based on changes occurring in schools;
- developing a new balance in teacher education between the universities, the TAFE system and schools built on contractual partnerships with well-defined roles;
- making a significant number of conjoint appointments by universities and employers to strengthen the connections between teacher education and schools;
• establishing greater continuity between pre-service teacher education and induction within a first teaching appointment, both of which should be conceptualised in a holistic way as constituting initial teacher education;

• transforming the curriculum of teacher education to orientate it towards a case-based and problem-solving approach, consistent with current pilot projects in some universities;

• strengthening the teacher education curriculum so that future teachers will be able to adapt relevant technology to their pedagogy;

• guaranteeing that all teacher education students, irrespective of the phase of schooling for which they are being prepared or the subject discipline, have the necessary conceptual understandings to teach and reinforce reading, writing, numeracy and the use of computer technology;

• requiring all students and teacher educators to acquire knowledge about relevant current Board of Studies syllabus documents and to understand the connections between the mandated curriculum and the pedagogy which best delivers it in a range of contexts;

• linking more closely and formally teacher education faculties with the Board of Studies so that teacher educators have access to all current and relevant documents;

• requiring all teacher education students to acquire contemporary knowledge and understandings about issues in the assessment and reporting of student learning outcomes;
• allowing all students to gain contemporary understandings about how schools operate, issues related to school culture and implications for their teaching, and the role of the teacher in school, parent and community relations;

• equipping students with knowledge and skills to fulfil and sustain the parent partnership critical to the quality of schooling outcomes;

• integrating behaviour management into professional experience and course learning components;

• increasing the orientation towards the diversity of employment settings which future teachers will enter, including contract work, for which most teachers are inadequately prepared, although it will be a reality for many;

• building in the concepts of just in time and just for you learning, so that teachers have the skills to access prepared, quality information relevant to their teaching rather than constantly inserting additional content into the initial teacher education curriculum;

• repositioning components of the mandated teacher education curriculum so that the employers take greater responsibility for the outcomes achieved, through a structure in which the universities also have a continuing role and responsibility;

• increasing the focus on good student teachers to make them better, rather than spending effort in pushing the marginal to pass;

• requiring teacher educators to provide clear advice to student teachers about their suitability for teaching; and

• discontinuing the culture of not failing students, particularly in the professional experience component. (Ramsey, 2000, pp. 58-9)
Ramsey (2000) stated that reforms such as those listed above cannot be achieved in isolation and that cooperation is needed from the entire school community. This community would include Universities, the Department of Education and Training (DET), government and non-government schools.

At present in NSW there are several Faculties of Education at different universities trialing or implementing alternative models for the delivery of teacher education. These models include internships, on-line delivery, and establishing partnerships between universities and schools. Some of these universities include Charles Sturt University, Australian Catholic University, University of Technology Sydney and the University of Wollongong. However, Ramsey (2000) highlighted the fact that without a central or professional body reporting on standards or best practice in teacher education it is difficult for teacher educators to remain informed about initiatives and approaches being undertaken in universities other than their own.

Ramsey (2000) clearly states that if change to teacher education is going to be effective then it must involve a partnership or reconnection between universities and schools. Ramsey was resolute that the Review should not suffer the same treatment of previous reports because the quality of teaching and teacher education matters.
Summary of Literature Review

The preparation of teachers and current teacher education programs according to Tripp (1994) have not stood up well to public scrutiny. The associated problems of conventional teacher education programs were identified by Louden (1993) as collisions between university-based theory and school-based practice. This chapter has shown that since the 1930's various teacher education models have either been implemented, proposed or trialed, however, they have met with varying degrees of success. To date, there have been name changes to the traditional models used in teacher education, but little change or marked differences in the way that teacher education programs are delivered or prepare preservice teachers.

The review of literature highlighted several teacher education innovations currently in use in the United States of America and Europe and reported on the underlying characteristics that these models contain in order to be considered as innovative. These models featured the use of cohort groups, collaboration between the academy and the schools for increased field-based experiences, mentoring, problem-based learning and reflection.

Whilst the literature showed that there have been some twenty reviews of teacher education in the last twenty years, the latest review by Ramsey (2000) highlighted that little if any of the some 400 recommendations and conclusions that had been proposed for teacher education had been initiated.
The following chapter is a review of literature that is associated with the design of an alternative mode of teacher education that was trialed at the University of Wollongong.
Chapter Three: A Review of the Literature Associated with the KBC Design

Introduction

Chapter Two reported that teacher education programs according to Tripp (1994) have not stood up well to public scrutiny. The chapter highlighted several traditional and innovative models of teacher education and stated that in NSW many recommendations for teacher education over the last twenty years had been proposed (Ramsey, 2000) but few implemented. The challenge, for teacher educators, is to create programs that will prepare the beginning teacher for the intricacies of life in the classroom.

Two major themes have emerged from studies that seek to follow up graduates of teacher education courses. Firstly, many students report that they leave university with feelings of being under-prepared for life in classrooms and confused by what confronts them when they arrive at schools (Grant, 1994). Secondly, the schools, which employ recent graduates, report that a majority of Wollongong students are unaware of how school and classroom cultures operate (Armour & Booth, 1999). Beginning teachers in NSW are often unable to see the relationships between what they have studied at university and how it can be translated into classroom practice that produces effective student learning (MACQT, 1998). This situation has arisen because teacher education courses have presented a fragmented view of learning due to the specialised nature of the subjects that make up the degree. The situation has hindered both the preservice development and further professional socialisation of teachers.
Teacher educators need to take the initiative to instigate change in teacher education. The role played by teachers in the future of society cannot be underestimated. In New South Wales the Department of Education and Training (1999) proposed a model of seven attributes for effective teachers. This model included the proposition that teachers are masters of the content of their subjects, experts in the art and science of teaching, exemplary in their management of student behaviours, committed to their students and leaders in their learning community i.e. the classroom. The model went onto include that teachers should be reflective practitioners and embody the qualities of an educated and upstanding citizen. The effective teacher according to Abbott-Chapman, Hughes, Holloway & Wyld, (1990) and Hughes, (1994) is also seen as one who can combine management, content knowledge and interpersonal skills. Preservice teacher education needs to provide prospective teachers with a strong foundation of knowledge and skills, and instil a culture and belief for life-long learning.

Taking the above into consideration a Cambourne (Personal Communication: 22/10/98) said that a teacher education model needs to have specific features and characteristics and he proposed the following:

- a program that teaches the skills necessary for teaching primary education children in the 21st century;
- a program that sees innovation and evaluation as central concerns;
- a program that develops life-long learning in staff and students;
- a program that revises the traditional relationship between the university, the school and the practicum;
• a program that teaches content in a more integrated and meaningful way for the students, with less duplication and fragmentation;

• a program that makes students aware of the culture of schools and the complexity of a teacher's role; and

• a program that aims to build collaboration between the principal stakeholders; namely, the NSW Department of Education & Training, the NSW Teachers Federation, the Teacher Education Faculty, the School-based Teachers, and the Preservice teachers, so that all are involved in the development and implementation of any new program.

The above features were then incorporated into the design of the KBC Project at the University of Wollongong.

The Origins of an Alternative Teacher Education Mode of Delivery at UOW

In an effort to answer the criticisms that have been levelled at teacher education the alternative model that one teacher education faculty has adopted and trialled for a cohort of its preservice teachers will be examined. Like most institutions charged with the responsibility for preparing teachers, the University of Wollongong's Faculty of Education has long been conscious of the documented shortcomings of 'traditional' models of program delivery. These 'traditional' programs feature mass lectures and tutorials, punctuated by prescribed periods of examination and practical experience.
The approach undertaken by the UOW is a collaborative venture between representatives from the Faculty of Education, the NSW Department of Education and Training (DET) and the NSW Teachers Federation. This Reference Group began meeting regularly and negotiating details in January 1997. The overall intent of the Reference Group was to explore issues inherent in changing two major aspects of teacher education at the UOW:

- the teaching/learning culture of undergraduate teacher education; and
- the traditional mindset and culture associated with practice teaching/internship in schools.

In order to adopt the above it was decided that the alternative model would seek to achieve these changes by:

- shifting the mode of program delivery from the traditional campus-based-lecture-tutorial mode to a ‘problem-based-learning-within-a-school-site’ mode;
- reconceptualising the nature of what has been traditionally known as ‘practice teaching’ or ‘the internship’ so that there is a closer link among the specialised knowledge in Education courses and the nature and culture of schools and how they do business so that it is better understood both by students and local schools and teachers; and
- renegotiating the professional relationship between the NSW DET, the university, local schools, and the NSW Teachers Federation so that a new form of ‘practice teaching’ could be collaboratively developed.
It was decided that these aims would be implemented through an inquiry and problem-solving approach with a greater integration of the practical field-based component with the theoretical content.

In 1999, the Faculty of Education at the University of Wollongong implemented its alternative teacher education program in initial teacher training. This project became known within the faculty and collaborative partners as the “Knowledge Building Community (KBC) Project”. In 1999 the KBC Project commenced with twenty two primary education students from the first year cohort (approximately 12.5% of the total intake) and was supported by four local schools whose staff had full commitment to the project.

What is a Knowledge Building Community?

A Knowledge Building Community is a group of individuals dedicated to sharing and advancing the knowledge of the collective. ...what is defining about a Knowledge Building Community is a commitment among its members to invest its resources in the collective pursuit of understanding.

(Hewitt, Brett, Scardamalia, Frecker & Webb, 1995)

When Scardamalia and Bereiter first started using the term ‘knowledge building’ in 1987 it had not been encountered before but within ten years the term was commonly used but often inaccurately (Bereiter, 1999). The notion of students and teachers working together in collaboration has been in educational conversation since Dewey but in the last decade has been taking a more definite shape in various programs (Scardamalia & Bereiter, accessed January 2000).
These various experimental programs have taken place predominantly in school settings. Scardamalia and Bereiter present the knowledge building community as a means of reforming the culture of the classroom (Hewitt et. al., 1995). The adoption of this approach sees the class become a research team aimed at advancing its own “collective, intellectual growth through sustained, collaborative investigations” (Hewitt et. al., 1995, p. 1). In knowledge building schools the students are engaged in producing ideas, theories and interpretations; they engage in discussion, test, compare, modify and seek to improve their knowledge rather than simply complete a school task (Nason, 1998). The belief therefore behind this approach is that students undergo higher level operations and co-operations that encourage understanding rather than rote learning of facts.

The literature does not provide any examples of knowledge building communities being established in teacher education. Based on the principles espoused by Scardamalia and Bereiter (1989, 1991, 1993, 1996) the student teachers involved in the KBC Project at the UOW are working in a learning environment that supports the continuous social construction of knowledge (Vygotsky, 1978). There are nine principles proposed by Scardamalia and Bereiter (1993) for a KBC in an elementary school classroom. Table 3.1 shows how these characteristics can be applied to the UOW model of teacher education known as the KBC Project.
<table>
<thead>
<tr>
<th>Scardamalia and Bereiter’s KBC’s Characteristics in a School Classroom</th>
<th>A Proposed KBC for Teacher Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>• There is a sustained study of topics in depth, sometimes over a period of months, rather than superficial coverage.</td>
<td>• Students need to undergo a thorough analysis of each university subject to understand what they are expected to learn before they can apply subject content to classroom context. <em>(PBL &amp; SBL)</em></td>
</tr>
<tr>
<td>• The focus is on problems rather than on categories of knowledge e.g. not the heart but rather how the heart works.</td>
<td>• Using the context of the school and the classroom, students undergo problem solving activities that aim to meet the subject outcomes of their compulsory university subjects. <em>(SBL)</em></td>
</tr>
<tr>
<td>• Inquiry is driven by students’ questions. The teacher helps formulate better questions and encourages them to reformulate questions at higher levels as inquiry proceeds.</td>
<td>• Student-centred problem solving, need for sustained observation in schools and classrooms. <em>(PBL)</em></td>
</tr>
<tr>
<td>• Explaining is the major challenge. Students are encouraged to produce their own theories to account for facts and to criticise one another’s theories by confronting them with facts.</td>
<td>• Contextualising the theory – sharing their meaning making – in a collaborative supportive environment. <em>(CL)</em></td>
</tr>
<tr>
<td>• Although teachers pay close attention to how each student is doing, the day-to-day focus is progress toward collective goals of understanding and judgement rather than on individual learning and performance.</td>
<td>• Each student group determines their assessment tasks. Each group will need an understanding about shared grades i.e. the same mark for all group members. <em>(CL)</em></td>
</tr>
<tr>
<td>• There is little schoolwork of the conventional kind where the students are working individually but rather all are doing the same thing. More typically students work in small groups; each group has a different task related to the central topic and plans how to distribute work among its members.</td>
<td>• Students will not attend lectures or tutorials. Students will work in the KBC homeroom doing workshop activities in small groups. Each group will be working on assessment activities that are relevant to the school where they are carrying out their School-based learning. <em>(SBL &amp; CL)</em></td>
</tr>
<tr>
<td>• Discourse is taken seriously. Students are expected to respond to one another’s work and are taught how to do so in helpful, supportive ways.</td>
<td>• Community-based activities support open discourse. <em>(CL)</em></td>
</tr>
<tr>
<td>• The teacher’s own knowledge does not curtail what is to be learned or investigated. Teachers can contribute what they know to the discourse, but it is stressed that there are other sources of information.</td>
<td>• The university lecturer’s role changes from ‘expert’ to co-learner or facilitator.</td>
</tr>
<tr>
<td>• The teacher remains the leader, but the teacher’s role shifts from standing outside the learning process and guiding it to participating actively in the learning process and leading by virtue of being a more expert learner.</td>
<td>• As above</td>
</tr>
</tbody>
</table>

Table 3.1: A comparison of the characteristics of a classroom KBC and a KBC in teacher education
The characteristics for a proposed teacher education KBC embody three principles Community Learning, School-based Learning and Problem-based Learning. These three learning principles are explained in the next section and when scrutinised it can be seen how they are relevant to the KBC's design.

The Three Learning Principles of the Knowledge Building Community Project at the University of Wollongong

The three learning principles underpinning the KBC Project at the UOW are Community learning, School-based Learning and Problem-based Learning.

Community Learning (CL):

This is achieved through the sharing of ideas and experiences with other community members, these being the preservice students themselves, the facilitators (lecturers), and school-based teachers.

School-based learning (SBL):

This is achieved through participating in the school context over a regular period of time and working in conjunction with mentor teachers and university facilitators. This triad become co-learners.
Problem-based learning (PBL):

This is the notion of a curriculum created around a version of problem-based learning designed for use at the University of Wollongong. It will ensure students are engaged in group discussions and data collection to address real-life problem scenarios found in school settings.

The KBC Project's structure based on the three principles of learning provides for authentic problem-solving in settings familiar to the student (school-based learning). Authentic problem solving activities provide the students with the ability to transfer knowledge. This is best accomplished by learning at the same time as application or the 'cognitive apprenticeship' (Collins, Brown & Newman, 1989). This notion encapsulates the idea of the student teacher as the junior or novice in the discipline rather than simply the recipient of instruction.

The basic task in a KBC is to shift learning to the construction of collective knowledge and it is the students who are the principal ‘doers’ of this work. For students to play a central role in their learning they need a vehicle that will allow them to do so. This is where the third source of learning in the KBC Project fits very neatly. Problem-based learning will allow students to be active participants in the construction of knowledge. In the KBC Project problems are initiated and solved through interaction in the reality of the classroom and with the support of mentor teachers in the school setting, facilitators on campus and the preservice teachers within the ‘community of learners’.
Although learning can derive from each source, the most effective and desired type of learning environment occurs when they combine. The interaction among these three sources (CL, SBL & PBL) has the potential to establish deep learning processes (Biggs & Collis, 1982) required for the knowledge building community. This process is ongoing, iterative, sometimes ill-defined, and, if successful, results in sustained life-long learning.

As stated above the KBC Project has three underpinning learning principles. These principles are represented in Figure 3.1 as interconnecting circles. It is thought that if the three circles or learning principles intersect a knowledge building community has been formed.

![Figure 3.1 The KBC's Learning Principles](image)

Each of the learning principles of the KBC Project will be discussed fully in order to understand their relevance and significance to this alternative teacher education model.
1. Community Learning

As previously stated the KBC Project is made up of three principles. The first of these to be discussed is Community Learning (CL). This first principle sees a major shift from the traditional teacher education paradigm. The traditional “lecture” model according to Hamada and Scott (accessed, September 2002) emphasises the transmission of factual data from a teacher to a student. Drane (2000) states that this ideal is based on the construct that knowledge is certain.

Various names have been applied to the form of teaching that the first KBC learning principle is based upon e.g. cooperative learning, collaborative learning, collective learning, learning communities, peer teaching, peer learning, reciprocal learning, team learning, study circles, study groups, and work groups (Gross-Davis, accessed September 2002).

This first KBC learning principle therefore, requires the development of a “community of learners”. Communities of practice are not new, however the term was first coined by Lave and Wenger (1991) when they stated that because we all belong to a family, school, work, or sporting groups, most of us are familiar with this notion. They stated that such communities are an integral part of human daily life but the reasons for them are not as explicit. In regards to the KBC Project the community learning principle can be defined along the three dimensions proposed by Wenger (1997):
• what it is about – it is a joint enterprise as understood and continually renegotiated by its members;
• how it functions - mutual engagement that binds members together into a social entity; and
• what capability it has produced - the shared repertoire of communal resources (routines sensibilities, artifacts, vocabulary, styles etc.) that members have developed over time.

The theoretical perspective behind the CL principle is based upon a constructionist learning environment. A constructionist learning environment values personal autonomy, generativity, reflectivity, active engagement, personal relevance and cultural pluralism (Sherry, Billing & Tavlin, 2000. p. 109). These environments engage students in a continuous collaborative process of knowledge construction in an environment that reflects the context and encourages knowledge building conversation and collaborative assessments tasks. Various research groups have presented notable models of this kind of teaching and learning including: CSILE by Brown (1994), the CoVis project by Pea (1994), Mediated Collaborative Knowledge-Building in England (Crook, 1994), Online Book Discussion in Norway by Mehus (1995), Group-Based Project Work in the Netherlands (Collis, Andernach & VanDiepen, 1997), Asynchronous Learning Network (electronic conversation between students and instructors) carried out by Winiecki (1991) and the WEB Project in Vermont (Sherry et. al., 2000). These models have a common denominator in that they provide a shared space where students interact and comment on each other’s work.
The KBC Project’s community of practice is made up of the preservice teachers, the school-based teachers and the facilitators on campus. It is the expectation that this community will establish a sense of trust among its members as they work together in small groups. Group-based learning is the foundation for problem-based learning, it allows for what Thorley and Gregory (1994) describe as a challenge to teaching and learning which is heightened when human interaction is involved in group activity. Gokhale (accessed September 2002) states that group-based learning refers to an instruction method in which students at various levels work together in small groups toward a common goal. The students are responsible for one another’s learning as well as their own. Thus, the success of one student helps other students in the group.

The KBC CL principle also allows for the immersion of the preservice teachers into classrooms where a mentor teacher will support them. Traditionally, school-based teachers have supervised student teachers in the application of knowledge they have gained elsewhere.

**What is a Mentor Teacher?**

The school-based teacher in the KBC Project takes on the role of mentor. Mentoring is not a new concept. The origins of the term mentoring can in fact be traced back to Greek mythology. In Homer’s Odyssey (circa 800 BC) Mentor was the faithful and loyal companion of Odysseus, the King of Ithaca. When Odysseus left for the Trojan Wars, he left Mentor with instructions to take care of the royal
household. In particular it was Mentor's duty to care for and raise the king's son, Telemachus. It was Mentor's responsibility to see that Telemachus ascended the throne as Odysseus' successor. It is said that Mentor became a father figure, teacher, counsellor, trusted advisor and a challenger to the young Telemachus.

Mentor in Greek mythology is credited with providing a safe and proper development for his charge. The protective aspect of the role Mentor provided has led to the use of the word 'protégé' a derivative from the French verb, protégé, which means to protect. Hence, protection and development of the protégé has been the primary definition of mentoring in history.

The changes and demands of time have seen many meanings applied to the classical adaptation of the mentor-protégé dyad. The Australian Oxford Dictionary defines mentor as an experienced and trusted advisor. While the Webster's Universal Dictionary states: Counsellor, a wise and prudent advisor. Philips-Jones (1982) states that in the contemporary era the term mentor can be applied to define influential people who significantly help you reach major life goals. Caldwell and Carter (1993), state that the mentor-protégé dyad is a 'mentorship'. They describe this mentorship as a learning partnership between two or more individuals who wish to share or develop a mutual interest. The mentor serves as an advisor, a guide, a networker, and as a role model to the learner who seeks to explore the mentor's experience. To apply this concept to the teacher education context Tomlinson (1995) defines mentoring as "assisting student teachers to learn how to teach in school-based settings" (p. 7).
The efficient delivery of mentoring can only be achieved when all parties are aware of its definition. Problems with the practice of mentoring have arisen when programs have been implemented with too little conceptual understanding of mentoring, unrealistic expectations, poorly thought-out implementation strategies and the lack of formal arrangements, with regard to the rights and responsibilities of partners (Little, 1990; Long, 1994).

A major criticism of the traditional apprenticeship model is that it views the student teacher as a passive learner (Brooker & O'Donoghue, 1992). In learning to teach, students are trying to achieve something very complex. Students have to acquire a set of skills that are intended to inform them about the dynamics of classroom life, an understanding of how children learn, an understanding of the curriculum to be learnt by the children and a knowledge of how to support children in schools. Teaching must be seen as more than a craft that can be acquired simply by being a watchful apprentice (Edwards & Collison, 1996). In the KBC Project the concept of mentoring is distinctly different from the traditional concept of supervising teacher.

Teachers in supervising roles once felt it was necessary to pass on survival tips to the student teacher. A mentor teacher as well as carrying out the traditional socialisation aspects will also be responsible for articulating the reasons for actions and behaviours in schools and to place them in the context of the teaching/learning process. In school-based education the student teacher must learn the social, psychological and philosophical underpinnings of the teaching practices and learning processes that they are involved in. From their mentor
teachers, students need to gain an understanding of the organisation and management of the whole curriculum (Field & Field, 1994).

The new role of teacher as mentor supports and scaffolds the learning of the novice in a variety of ways until the learner is able to work without the support of the mentor (Edwards & Collison, 1996). The work of Vygotsky underpins the concept of scaffolding. Vygotsky argued that learning is most effective when learners co-operate with one another in a supportive learning environment with the careful guidance of a teacher. Vygotsky believed that all higher mental functions have social origins and he stressed the role of social communication in cognitive development by conceiving that learning takes place in the zone of proximal development (Berk, 1991).

Wertsch (1978) defines the zone of proximal development as the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under the guidance or collaboration with a more capable peer. This guidance or collaboration is also referred to as scaffolding. Vygotsky's theory supports many teaching strategies and in particular the notion of cross-age tutoring or learning from a more knowledgeable peer. As a mentor the teacher is considered the more knowledgeable peer.

Teachers are asked to become mentors because they have expertise from many years of teaching that they can share (Edwards & Collison, 1996). A teacher's knowledge in action is a well-combined mix of a variety of elements. These
elements include knowledge about the content of the curriculum, knowledge about teaching and knowledge about learning (Shulman, 1987). These are the elements that students need to acquire while training so that they can mix their own blend of pedagogical content knowledge (Edwards & Collison, 1996). In school-based training the practical experience can be immediately linked to the principles of practice as students and mentors work together.

In order for students to see the connection between theory and practice, mentor teachers need to give their mentee time to carry out school-based investigations. For example if students are enrolled in Language 1 which looks at how children learn to read then the mentee needs to investigate how reading is taught in their school setting. Therefore it is important that mentors need to feel confident that they know exactly how the school-based experience fits into the course being delivered by the university. If teacher education in schools is not clearly defined and structured there is the likelihood that the academic elements described above are lost. There is a distinct difference between social support that puts newcomers at ease and professional support that aims to advance development of knowledge and practice (Field & Field, 1994).

Mentoring, as opposed to supervision, requires a new set of skills and training (Odell, 1992; Field, 1992).

Just as becoming a classroom teacher involves making a transition from being a student to a professional, so becoming a mentor involves making a transition from classroom teacher to teacher educator.

(Dobbins & Wasley, 1992, p. 2)
Mentor teachers need to encourage student teachers to focus not only on their own learning but also on what is happening around them in the classroom, thus emphasising the link between theory and practice.

**Co-Learning**

Within the community learning principle the model of co-learning is also in operation. Co-learning in the KBC Project refers to the relationship between the three participants:

- the preservice teacher;
- the mentoring-teacher and other members of the school staff; and
- the university facilitators who are responsible for coordinating, mediating, monitoring and evaluating the preservice teachers as they progress through the university semester.

Cambourne (1998b) describes the relationship of co-learning among the above three groups as thus:

> A co-learning relationship is characterised by the different stakeholders agreeing to engage in a cooperative venture, with each group acknowledging the different knowledge, expertise and needs of the others, and while according each other different roles and responsibilities, those involved also accord each other 'equal status' in the enterprise. In a co-learning enterprise no one group or person 'owns' the project; there is no 'boss' who makes unilateral decisions. At the core of 'co-learning' is trust, support, caring, the development of shared meanings, and a willingness to be honest with each other.
The co-learning that is undertaken as a part of the KBC Project will need to encourage analytical, objective questioning, probing, the need to look for alternatives and challenging the status-quo modes of thinking. These modes must be able to continue in order to produce the balanced teacher education that Hannan (1995) sees as essential. These methods of thinking would be undertaken in a partnership between the mentor teacher and the university facilitator in order to encourage and develop the student teacher.

2. School-based Learning

The school is more than a conglomeration of buildings and people. It has a culture that has evolved as a response to wider cultural values (Bullough, 1987). To function, and indeed to survive, a beginning teacher must understand this culture. The culture of a school is organised on different levels. There is the school structure or the way in which the work in the school is organised and to comply with this a beginning teacher may need to adopt a certain degree of conformity. Central to the school culture are the students, other teachers, administrators, and parents who all directly or indirectly encourage this conformity. Life in a school is complex, often confusing and contradictory. Accommodation in a new teaching role requires some reproduction of the accepted culture.

Therefore the second principle of the KBC Project’s structure is aimed at developing a rudimentary understanding of school-based culture, and how schools do business. At the school site there are definitive structures, processes and roles to support the preservice teachers and the school-based staff. Structures, processes
and roles grow out of the activities that take place in the setting. During the time that the preservice teachers are in schools each week they are expected to be engaged in three kinds of activity, namely:

1. The Weekly Planning Meeting.
2. Being a ‘Professional Classroom Apprentice’.

Details of each of these activities are discussed below.

The Weekly Planning Meeting

Description / Definition

This activity would be in the form of a general meeting, at the school, among the preservice teachers, one lecturer, and a representative of the school staff, probably the most senior of the mentoring teachers. The purposes of this meeting would be:

- to allocate and clarify each student’s four-five hours of ‘apprenticeship’ activities for the week. (See details of ‘apprenticeship’ roles below);
- to allocate and clarify each student’s four-five hours of ‘educational anthropological’ activities for the week. (See details of ‘educational anthropological’ roles below);
- to provide a forum for identifying and addressing issues/concerns associated with students’ and/or lecturers’, and/or teachers’ participation in these roles;
- to provide a forum for professional discussions associated with the student’s learning and practice in the school setting;
to provide a forum for monitoring/planning the day-to-day running of the in
school program; and

to provide a mechanism for checking the student's planning for the
forthcoming week, discussing self-evaluations of the previous week's
performance, and discussions of each other's professional issues and concerns.

Roles

The weekly planning meeting necessitates certain undertakings by 'The KBC in-
school coordinator'. This role involves the following tasks:

- negotiating in advance with the rest of the school staff to identify 'apprentice'
type tasks which students could be asked to undertake to support different
teachers for four-five hours each week;

- negotiating in advance with the rest of the school staff and the lecturer the
'educational anthropology' tasks which the students will be engaged in during
the week;

- being the 'contact-point' between the students at the school and the rest of the
school staff and between the school and the university lecturer; and

- overseeing the day-to-day presence of students in school when lecturers are
not present.

The Processes / Structures necessary to support the KBC in-school coordinator
would see a system created which:
• allowed other teachers on staff to apply for ‘apprentice teacher’ support in advance;
• allowed other teachers / lecturer(s) to plan the ‘educational’ anthropology’ tasks; and
• provided structures / processes to deal with unpredicted hiccups during the 9-10 weeks the students would be in the school. These systems would need to be designed collaboratively with the university lecturer who was associated with the school.

The ideal time for the design of these systems is prior to the arrival of the preservice teacher in the school setting.

The Professional Classroom Apprentice

Description/Definition:

While the apprenticeship role envisaged in this project has some similarities to the traditional apprenticeship role, it also has some important differences. In the traditional apprenticeship model, apprentices are inducted into a community of expert practice in which the “teacher” continually engages in and is a master of, the practice being learned. His or her performance constitutes the standard for the apprentice.
Chapter Three – Literature Associated with the KBC Design

The model designed for the KBC Project is different in a number of aspects. Firstly there is no assumption that the teachers to whom these ‘apprentices’ will be allocated are ‘master’ teachers. The model envisaged is one which allows these apprentices to be allocated to teachers who may exhibit a wide range of philosophies, techniques and abilities. Issues of ‘quality control’ will be handled by mechanisms other than the selection of so-called ‘master-teachers’ (Cambourne, B. L., Personal Communication, 22/10/98).

Secondly, the apprenticeship model to be implemented in the project is based on the Collins, Brown, and Newman ‘Cognitive Apprenticeship’ (1989) model. This model ignores the usual distinctions between ‘academic’ and ‘vocational education’, its objective being to initiate the novice into a community of expert practice. The model presumes that learning is learning, irrespective of the discipline or content. This model has four building blocks; “content”, “methods”, “sequence” and “sociology”. Each of these ‘building blocks’ is discussed below.

a) Content

University-based lectures/tutorials usually focus exclusively on the concepts, facts, and procedures of a subject. The cognitive apprenticeship model argues that to operate effectively in any setting, students also need three additional types of content, namely:

- ‘tricks of the trade’ i.e., problem-solving strategies that practitioners pick up with experience;
- cognitive management strategies, goal setting, strategic planning, monitoring, evaluation, and revision; and
• learning strategies, knowing how to learn, including exploring new fields, getting more knowledge in a familiar subject, and reconfiguring knowledge already possessed.

b) Methods
The cognitive apprenticeship model argues that the methods used to induct novices into the profession should give students the chance to observe, engage in, invent, and/or discover expert strategies in context. The Collins, Brown, and Newman (1989) model includes a variety of methods that systematically encourage student exploration and independence. Mentors coach, offering hints, feedbacks, and reminders; they provide “scaffolding” i.e. the support for students as they learn to carry out tasks; and then they “fade”, gradually handing over control of the learning process to the student.

c) Sequencing
The cognitive apprenticeship model argues that learning should be staged so that the learner builds the multiple skills required in expert performance and discovers the conditions under which they apply. This requires a sequence of increasingly complex tasks, increasingly diverse problem-solving situations, and the staging of learning so that students develop a feel for the overall terrain before attending to details.

d) Sociology
Finally, the cognitive apprenticeship model argues that the learning environment should reproduce the technological, social, time, and motivational characteristics
of real world situations where what is being learned will be used. It is only through encountering subject matter and knowledge in context that most students will learn when, where, and how the knowledge applies to other situations. For example, in the real world, people have to work with others; this model calls for students to work together to solve problems and carry out tasks.

In keeping with the, Collins, Brown, Newman (1989) model the apprenticeship activities through which the students can support teachers would be sequenced in the following manner:

- the first third of the in-school experience (three weeks) would be devoted to the traditional 'teacher-aide' type activities such as preparing materials, worksheets, putting out and collecting materials, checking work books, assisting with group work under teacher supervision, helping with supervision in the playground, at school excursions, sports days etc; and
- in the latter two thirds of this period (six-seven weeks) these tasks will become more 'teacher orientated than the above support role. The tasks that the preservice teacher would now be engaged in have evolved and would involve such things as working as a remedial support with individual and/or small groups of children, and taking the whole class and/or small groups for simple lessons, on a regular, systematic basis.

There are again certain structures / processes necessary to make the 'Professional Apprenticeship' role work. This aspect of the project will need to develop structures and processes for:
identifying the range of apprenticeship activities that schools and teachers would find valuable during the KBC students' ten weeks at school. This would need to be done well in advance of the students' arrival at the school;

- allocating these apprenticeship activities to students in advance (at the weekly planning meetings);

- providing support and instruction necessary for the performance of these activities;

- monitoring the performance of these apprenticeship activities; and

- developing a five week preparation course at the university when the traditional lecture-tutorial program begins for the mainstream students. Part of this course is devoted to giving students insights and skills necessary to participate in the Professional Classroom Apprenticeship role.

The participating KBC lecturers share the teaching of this course and in the true spirit of community of learners the expertise from the school-based personnel should be utilised.

**The Educational Anthropologist Role**

Description / Definition

In this role students will be expected to use the methods and tools of anthropology in order to 'understand and explain' the school and classroom cultures in which they find themselves. Like classical cultural anthropologists they will regard the
teachers, students, ancillary staff, and parents of a school as ‘members of a tribe’ that has developed a certain ‘culture’ that is lived out in the school setting. To achieve this they will need to:

- observe the ‘tribe’ in action and take field notes which can be later analysed and used to support the problems they will be expected to address and resolve back at the university;
- find and interact with key members of this ‘tribe’, using them as ‘informants’; and
- analyse artefacts which this ‘tribe’ produces and uses.

The structures / processes necessary to make the ‘Educational Anthropologist’ role work need to be instigated at both the school and university. They are identified as:

a) At the School Level

- a process for identifying teachers and students to become ‘informants’. These need not necessarily be those teachers who are going to be ‘mentors’;
- a structure and process for students to meet with and interview those who are willing to be informants; and
- a structure and process for students to become observers of different classrooms.
b) At University Level

- a five Week Preparation Course to include the development of the skills, techniques and ethics of ‘doing anthropology’ in the school setting.

This school-based learning principle of the KBC Project has at its basis the aim of reducing “reality shock”. The roles and processes that the preservice teachers will need to be engaged in whilst in the school are designed to increase the preservice teacher’s understanding of a teacher’s “real” role in the classroom and the school. It is expected that the preservice teachers whilst in their allocated schools will, through immersion in the school culture, learn what it is that teachers and schools do on a daily basis.

The first session of the KBC Project isn’t necessarily about learning how to teach, it’s about learning how schools operate. This is a deliberate planning strategy to answer and address the complaints identified in the literature concerning university graduates. The literature states that whether they are from teaching, medicine or engineering new graduates from university have only theoretical knowledge, they do not have an understanding of the culture of the work site.

(Cambourne, B. L., Personal Communication 22/10/98)

The preservice teachers involved in the KBC Project need to direct their focus onto the roles of teachers. Teachers have multiple roles in schools; the neglect of this aspect has often been the root-cause for the onset of “reality shock”. The KBC Project wants students to achieve an understanding that teaching is the combination of multiple roles. As the role of a teacher crosses into the area of
how schools do business, the multiple facets are closely intertwined and it is necessary for preservice teachers to understand their inter-relationship. The underlying premise of the second principle is that a teacher doesn’t simply go into a classroom, prepare a lesson, teach it and then go home; there are many other perspectives that need to be considered. The roles and functions of a teacher may include some or all of the following:

- planning and organising lessons in line with departmental curricula;
- overseeing several classroom situations at the one time, whilst ensuring that the teaching/learning process is kept going;
- planning the investment of time eg. preparation of lessons, school activities (administrative and extra-curricular);
- coping with stressful situations;
- fostering a relationship based on mutual trust with students;
- functioning within an actual school context by taking account of specific aspects of school organisation and school policy;
- recognising the particular characteristics or problems of individual pupils;
- cooperating and planning with other teachers;
- being accountable for one’s own actions;
- developing strategies for analysing and solving problems;
- maintaining and upholding statutory regulations; and
- practicing effective communication between parents and guardians.

The above are the more pragmatic or official list of duties that a teacher may carry out in the course of 'being a teacher'. There is of course, the other more
fundamental or grassroots aspects that also factor into the myriad of tasks that a teacher assumes on a daily basis. These duties may involve collecting monies for various excursions, book clubs, and fund-raising activities, the crying, the nervous or the sick child, the new arrival, or a child who is caught in the middle of a domestic upheaval or trauma.

All of these are examples of the complexity of the roles that a teacher fulfils as part of their job. It is essential that beginning teachers in order to counter “reality shock” are aware of their existence and have an idea of how to deal with any of the examples or situations listed above when they enter schools.

The second principle of the KBC Project requires that the preservice teachers gain an understanding of the cultural aspects of the school. However, it is also imperative that, for the first and second principles of the KBC Project to be beneficial in the development of preservice teachers into competent teachers, a strong working relationship between the two institutions, i.e. the participating schools and the University of Wollongong, needs to be established.

Goodlad (1990b) argues that collaboration between schools and universities can result in schools evolving into centres of excellence. The University of Leeds’ guidelines to participating schools states the following:

Partner schools...provide the essential specific contexts in which students are supported in developing and rehearsing professional skills and qualities in order to become well-informed and reflective teachers. (Field & Field, 1994, p. 69)
The above extract clearly states the expected role of the partnership school. However, participating schools must not be compromised in their more central role, the educating of children. Above all, the schools must be convinced that their partnership will improve the quality of teacher preparation. Koerner (1992) states that Inservice teachers regard the time they spend with students as a helpful part of a preservice teacher education program. Therefore, it is vital to the future of the KBC Project that its implementation into schools is not seen as just another passing trend. The impact of recent restructuring and fiscal restrictions for some school-based teachers may mean a reluctance to take the concept either seriously or enthusiastically, as it may be perceived that another new concept will only follow.

The university’s role in the partnership extends beyond the physical venue in which students can meet, to reflect on, compare and contrast their experiences. The university will work with the schools in providing theoretical frameworks from which students are then able to develop a critical understanding of the teaching and learning that they are witnessing in their respective classrooms.

A logical example of a school and university partnership can be seen when a Vygotskian framework is applied to the training partnership. As already demonstrated, the mentor is a supportive player in the partnership who scaffolds and guides the novice learner (in this instance the preservice teacher).

The Vygotskian framework builds on the notion of support for the novice learner through the two institutions working together. The rationale for the model as
explained by Edwards and Collison (1996) states that students move alphabetically through four quadrants.

In quadrant A, they are introduced to key ideas in educational theory as they relate to classroom practice and also see examples of practice in schools. Students who are in quadrant B are attempting to make sense of what they have seen, read or heard in both the school and university settings. It is in this quadrant where knowledge about teaching meets knowledge of how to teach.

Quadrant C places students into a safe well-structured classroom environment where they can try out ideas in planning and teaching. The final stage is quadrant
D, here students have reached a confident and competent mastery of an aspect of teaching. Edwards and Collison (1996) attach a warning at this stage, reiterating that quadrants C and D are not to be seen as the same stage. In each of the quadrants in a partnership model of school-based training learning occurs in all four quadrants. Both mentors and university tutors are involved in each stage.

The university tutor can provide a further extension to the university’s role. As students attempt to move between the two institutions they can be assisted if their tutor has built up a strong working rapport with the school in which they are placed. The relationship between teacher mentors and university tutors is important, so that school-based educators do not perceive that the training of student teachers is all one-sided.

The following is an example of how the university - school partnership operates. If for example the preservice teachers were given a question, which required them to investigate the use of lesson plans it is feasible that a scenario such as the following may eventuate:

If student teachers are offered a model lesson plan, a simple framing may involve understanding it as a concrete recipe or routine. The plan may have a beginning, middle and end, which they copy and implement without fully appreciating why it takes that form. Alternatively, the same lesson plan may be framed by experienced teachers in rich and complex ways. They may bring to it a sophisticated appreciation of how children learn and a flexible understanding of the substantive and syntactic structure of knowledge incorporated within it. They may well have a deeper appreciation of why it takes the form it does and how it could be developed and adapted. (Furlong, 2000, p. 13)
Questions and concerns from regulating bodies such as the Teachers' Federation, the Department of Education and Training (DET) and other Education Faculty staff at the University of Wollongong, have centred on the competency or efficiency of the allocated schools. The KBC Project's design team answer this question emphatically with the response:

The issue of the school's status in the district will not bear a direct influence on the implementation of the KBC Project because initially the preservice teachers are placed into the school situation to learn how schools operate. Their safety net is the structure of the KBC Project. When back at the university campus for three days of the week the KBC Team will construct with the students a method of quality control that allows them to recognise if their school is or isn't functioning as it should. The principal aim is for preservice teachers to understand and recognise that when you put a group of adults and children together into a setting called a school there are certain regulations and restraints that are in place. What emerges from this setting is the sort of information the KBC Project's design team want the preservice teachers to obtain and then differentiate.

(Cambourne, B. L. Personal Communication, 22/10/98)

3. Problem-based Learning

The third and final principle of learning associated with the KBC Project is that of problem-based learning. Although problem-based learning has been extensively used in medical and other health professions over the last thirty years it has not widely crossed over into teacher education. The literature to support problem-based learning in preservice teacher education provides relatively few examples. Problem-based learning will be implemented with the students involved in the
KBC Project but doing so will require the realisation that many difficulties and challenges accompany the use of problem-based learning especially during the first attempt.

Barrows and Tamblyn (1980) state that the majority of difficulties in the application of problem-based learning are the result of poor understanding by students and staff of the process as a whole. Consequently they state that the following should be met in designing a unit of instruction that features problem-based learning and self-directed study:

- sufficient instructional time;
- absence of a competing instructional program that makes unfair demands on the students;
- preparation of adequate learning resources for self-directed study;
- adequate resource faculty;
- well-defined goals and evaluation techniques that are visible to both faculty and students;
- adequate orientation of faculty and students; and
- recurrent faculty workshops (with student participation).

(Barrows & Tamblyn, 1980, p. 189)

The KBC Project has been designed in such a way so that it can meet these recommendations. It is therefore necessary to define and discuss problem-based learning in some detail.
Higher education has become characterised by structured subject-based learning. Subject-based learning has the lecture as its central delivery mode. The lecture rates poorly as a means to motivate students. The core issue of the lecture is the lecturer's intent to cover set material (Margetson, 1994). However, effective student learning does not necessarily result from the lecturer having covered the material. It appears that no matter how well the lecturer performs during the course of the lecture, students still sit passively and are seldom involved (Margetson, 1994). Subject-based learning means that subjects are viewed in isolation from each other and it is the subject that is driving learning. This style of learning assumes that the learner is unknowledgeable (Woods, 1994). This isolation of subjects has been previously identified as one of the major flaws of the current methods of preservice teacher education.

By comparison, problem-based learning is a curriculum development and an instructional strategy designed to challenge students (Finkle & Torp, 1995; Novak, 1996). In effect what problem-based learning does is to encourage and motivate students to “learn to learn” (Duch, 1995). Above all, problem-based learning challenges students to take charge of their education (White, 1996). Problem-based learning at the most formative level is characterised by instruction which suggests that students working in small groups are given a “real world” problem to solve (Duch, 1995). It is the intention of small group work in problem-based learning to encourage the development of negotiation, communication and collaborative skills (Aldred, Aldred, Walsh & Dick 1997). The learning is self-directed, and the emphasis is removed from the teacher-centred approach.
Problem-based learning is believed to promote life-long learning, making knowledge relevant by placing it in context (Aldred et. al., 1997).

Problem-based learning with its emphasis on student-centred and individualised learning made it a suitable alternative for the education of the medical profession (Margetson, 1994) and it has been implemented into more than sixty medical schools worldwide (Savery & Duffy, 1995). Barrows and Tamblyn (1980) stated that it was “tailor-made” for medicine because it provided advantages for the acquisition of both knowledge and the development of problem-solving skills in patient care. They argued that problem-based learning and medicine worked in the following way:

Information, concepts and skills learned by the student are put into his memory in association with a problem. This allows for information to be recalled more easily when he faces another problem in which the information is relevant...By working with an unknown problem the student is forced to develop problem-solving, diagnostic, or clinical reasoning skills. The student must gather information, look for cues, analyse and synthesise the data available, develop hypotheses, and apply strong deductive reasoning to the problem at hand.

(Barrows & Tamblyn, 1980, p. 13)

Problem-based learning and medical education are synonymous in McMaster University in Canada, the University of Newcastle, Australia, and the University of Limburg at Maastricht, in the Netherlands (Margetson, 1994). Following its success in medicine, problem-based learning has been adopted in higher education in Australia, Europe, Canada and the United States of America (Albanese &
Mitchell, 1993; Berkson, 1993; Woods, 1994; Aldred, et. al., 1997). Examples of schools and faculties that have converted to problem-based learning include: the Medical School at Harvard University; the Faculty of Architecture at the University of Newcastle, Australia (Margetson, 1994); Speech Pathology at Flinders University; Dentistry at the Universities of Adelaide and Queensland (Aldred, 1995; Wetherall & Mullins, in Aldred et. al 1997); the Faculty of Science at the University of Delaware, Nursing; Social Work, and Engineering (Boud, 1985); Law, Optometry and Management (Boud & Feletti, 1991); Business Schools (Milter & Stinson, in Savery & Duffy, 1995) and Schools of Education (Griffin, 1995; Hughes, 1996). The Schools of Education that have adopted PBL have done so at subject level (Hughes, 1996) and have not replaced the total curriculum as the KBC Project proposes.

The following have been identified by Aldred et. al (1997) as influences for the increase in adoption of problem-based learning by higher education institutions since 1985:

- a need for professionals to be more able to fulfil the needs of the community (Kaufman & Obershain, 1985);
- perceived deficiencies in ‘traditional’ professional education (Boud, 1985; Kaufman & Obershain, 1985; Barrows, 1986; Berkson, 1993);
- a need to be able to cope with the demands of the information explosion in many areas of professional knowledge (Moses, 1990; Berkson, 1993);
- the need for professionals to be able to adapt to challenge and communicate effectively (Boud, 1985); and
• the need to acquire the skills for lifelong learning (Barrows, 1986; Moses, 1990; Woods, 1994).

The practice of medicine requires integration of knowledge, decision-making, working with others and effective personalised communication with patients (White, 1996). Similarly, teaching requires the same attributes i.e. the integration of knowledge, decision-making, effective communication with fellow staff, students and their parents. Therefore, it would appear appropriate that if problem-based learning has proven effective for medical schools then its implementation into teacher education faculties is warranted.

Problem-based learning places its emphasis on “real world” problems so that they best simulate problems associated with “real life” situations (Gallagher, Stepien & Rosenthal 1992). Problems encountered in “real life” are ill-structured. Ill-structured problems have the following characteristics:

• they require more information to understand the problem;
• the problem definition changes as new information is added to the situation;
• many perspectives can be used to interpret information; and
• there is no absolutely “right” answer.

(Barrows, 1990)

All learning in problem-based instruction stems from or is driven by the original question and the students’ initial questions about the problem, which they have been given.
What are the Benefits/Goals of Problem-based Learning?

Problem-based learning aims at engaging students to “learn about learning”. Problem-based learning promotes motivation, relevance and context, higher-order thinking, learning how to learn and authenticity.

Motivation:
Students become active in the learning process. Problem-based learning empowers students to take responsibility for their learning (Duch, 1995). The Illinios Mathematics and Science Academy (IMSA) Centre for Problem-based Learning, states that PBL allows students to have an impact on the outcome of their investigation.

Relevance and Context:
Problem-based learning offers students relevance and context because the problems deal with “real world” issues.

Higher-Order Thinking:
Due to the ill-structured question the problem calls for critical and creative thinking; the guessing game of “What’s the right answer the teacher wants me to find?” is removed (IMSA Centre for Problem-based Learning, 1998).
Learning How to Learn:

Through problem-based learning metacognition is promoted, along with self-regulation, as students are asked to generate their own strategies to solve the problem at hand.

Authenticity:

Problem-based learning demonstrates to students that learning has relevance and authenticity to the “real world” and is not merely an acquisition of facts.

The KBC Project’s design team are therefore anticipating that by adopting problem-based learning the preservice teachers involved will:

- initiate active, collaborative, student-centred learning processes;
- develop the problem-solving and self-educational abilities needed to meet the challenges of life and career in increasingly complex classrooms;
- have acquired an integrated knowledge-base structured around real world problems they will face in their future work, community and personal lives;
- engage a challenge (problem, complex task, situation) with initiative and enthusiasm;
- reason effectively, accurately and creatively from an integrated, flexible, useable knowledge base;
- monitor and assess their own adequacy to achieve a desirable outcome, given a challenge;
- address their own perceived inadequacies in knowledge and skills efficiently and effectively; and
• collaborate effectively as a member of a team working to achieve a common goal.  

(Cambourne, 1998a)

The achievement of these goals and effective implementation of problem-based learning at the University of Wollongong will require a shift from the traditional roles of teacher and student (IMSA Centre for Problem-based Learning at the 1996) because problem-based learning is a radically different approach to instruction (White, 1996). In higher education the most obvious difference with the introduction of problem-based learning will be the abolition of the lecture.

The Tutor's Role in PBL

Implementing problem-based learning means that the traditional role of the university tutor undergoes a significant change. No longer is s/he the transmitter of facts, delivering a body of knowledge. The tutor becomes a facilitator and must be prepared to ask open-ended questions, monitor progress, probe, encourage critical reflection, and make suggestions and help students to create a positive learning atmosphere which, by definition requires a high level of interpersonal skills (Margetson, 1994; Aldred et. al., 1997). Students need to become used to open-ended questions like: "What is going on here? What do we need to do to know more about it? and what did we do during the problem that was effective?" (Stepien & Gallagher, 1993).
The tutor, according to Barrows and Tamblyn (1980), assumes the role of 'metacognitive' coach. As metacognitive coach the tutor is no longer the knowledge-holder and disseminator; rather it is the students that assume the roles of active problem-solvers, decision-makers, and meaning-makers rather than passive listeners (IMSA Centre for Problem-based Learning 1996). Assuming the role of metacognitive coach, the tutor will practice scaffolding behaviours that they want their students to adopt, such as, thinking aloud and coaxing their students into becoming self-directed learners, at this point the tutor fades away (Stepien & Gallagher, 1993). The tutor's behaviour can have a direct influence on group function and an indirect effect on the learner's interest in the subject matter (Wilkerson, 1995). Barrows (1990) states that the mark of a successful tutor is knowing when to intervene, and not interfering too much in the group process and asking open questions.

Aldred et. al. (1997) state that the shift in roles for some tutors from that of teacher to that of facilitator equates with relinquishing control and may prove difficult. A new tutor in problem-based learning may find encouraging student centred-discussion the most difficult aspect when implementing problem-based learning (Wilkerson, 1995). Tutors in problem-based learning must also change their attitudes towards students and regard them more as co-learners or colleagues who are novices (rather than) recipients of paternalistic attitudes (Margetson, 1994). As identified earlier by Woods (1994), in subject-based learning the students were assumed as unknowledgeable; in problem-based learning this notion must be revolutionised in order for problem-based learning to succeed. Duch (1995) says that faculties that incorporate problem-based learning into their
courses empower their students to take a responsible role in their learning and as a
result must be ready to yield some of their authority in the classroom to the
students. The implementation of problem-based learning with its intent of
encouraging life-long learning habits answers Fullan’s (1993a) criticism that
current teacher education programs are not encouraging “continuous learning as a
career-long continuum” amongst its graduates.

Student Perceptions of PBL

The findings listed above strongly suggest that PBL is an effective way of dealing
with the frequently expressed complaints concerning the traditional form of
'lecture and tutorial-based delivery', the common method of content delivery
associated with preservice teacher education. This traditional method is often
criticised because it does not foster critical thinking and analysis but rather
promotes passive learning, which then gets regurgitated in examinations. This
passive style of learning is generally then replicated after graduation in the
classrooms of beginning teachers. The research into PBL cites examples of
students who are interested and excited about their learning. These students have
been shown to develop the skills and understandings needed in their chosen
profession more quickly.

An adjunct should be placed at this point because the transition to a PBL mode of
delivery should not be considered as an easy option or a quick fix. Just as the tutor
needs to adopt changes to practice, the students involved in the transition to PBL
also go through certain changes and these need to be understood for a smoother transition to PBL for all concerned. Students involved in PBL need to become self-directed learners and it must be realised that the benefits in this mode of learning are neither immediate nor automatic. The learning curve is very steep.

The students, whose teachers have been telling them everything they needed to know from the first grade on, don't necessarily appreciate having this support suddenly withdrawn. Some students view the approach as a threat, some students may gripe loudly and bitterly about other team members not pulling their weight or about having to waste time explaining everything to slower teammates.

(Felder & Brent, 1996, pp. 1-2)

The initial “glitches” involved with implementing PBL are both common and natural (Felder, 1995) and if they are understood they can be overcome without too much pain, panic or discouragement. Woods (1994) observes those students, when asked to take responsibility for their own learning, go through a series of steps that psychologists would associate with trauma or grief.

Table 3.2 (see page 113) is a combination of steps that have been adapted from Woods (1994) and Felder (1996).
### Chapter Three – Literature Associated with the KBC Design

<table>
<thead>
<tr>
<th>Stage</th>
<th>Student Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shock</td>
<td>Students try to fathom what is happening - frustration is common. “I don't believe we have to work in groups and she isn't even going to lecture on the chapter before the problem is due.”</td>
</tr>
<tr>
<td>Denial</td>
<td>Students try to cope by denying what is happening, often they work harder in the hope that the lecturer will stop using PBL and start to lecture again. “She can't be serious about this - if I ignore it, it will go away.”</td>
</tr>
<tr>
<td>Strong Emotion</td>
<td>At this stage students may display negative self talk, anger towards the facilitator and a loss of confidence. “I can't do it - I am going to drop this course.”</td>
</tr>
<tr>
<td>Resistance and withdrawal</td>
<td>Students hope the changes will go away or they opt to miss the PBL session. “I am not going to play her dumb games - I don't care if she fails me.”</td>
</tr>
<tr>
<td>Surrender and Acceptance</td>
<td>Now willing to accept PBL the students have a leap of faith and hope the new approach will work. “Okay I may not like it but I might as well give it a shot.”</td>
</tr>
<tr>
<td>Struggle and exploration</td>
<td>An exploration to define the new method. “Everybody else seems to be getting this - maybe I need to try harder or do things differently to get it to work for me.”</td>
</tr>
<tr>
<td>Return of Confidence</td>
<td>To achieve this stage it will be necessary to undertake reflection, organisation and reorientation. “I think it is starting to work.”</td>
</tr>
<tr>
<td>Integration and success</td>
<td>The new approach works. “This is alright I don't know why I had so much trouble with it before.”</td>
</tr>
</tbody>
</table>

Table 3.2: The Stages of Change from Traditional Teaching to a PBL Mode of Instruction

Some students will have an easier transition than others to PBL and will navigate their own path through the above steps. It is important to accept that any resistance that is met from the students when implementing PBL is a natural journey that they need to travel if they are going to move from dependence to intellectual independence (Kloss, 1994).

### Group Work and PBL an Indispensable Alliance

It is the intention of small group work in problem-based learning to encourage the development of negotiation, communication and collaborative skills among the team members (Aldred et. al, 1997). However, the utilisation of small groups for PBL is a managerial issue that must not be underestimated or neglected. Group work is not easy and like the implementation stages of PBL there are certain
stages and processes that each group go through on their way to solving any ill-structured problem with which they are presented.

Although we are born into and assimilate in groups all our lives, learning and working in groups requires preparation.

Students who are plunged into group learning without adequate assistance in managing group processes may do well - but all too often they find the group learning experience negative. This may not only reduce learning at the time but also possibly on future occasions.

(Thorley & Gregory, 1994, p. 35)

"Groups don't start off great they evolve" (Woods, 1995). Students involved in PBL need to know that in order to function as a group there are certain stages that groups pass through. Being aware of that evolutionary process fosters understanding and progress for group members. An understanding of these processes by the students will also help the smooth implementation of PBL. Table 3.3 outlines the evolution or stages that groups commonly pass through.

<table>
<thead>
<tr>
<th>Focus in each stage</th>
<th>Form Orient</th>
<th>Storm Conflict Control</th>
<th>Norm Emerge Affection</th>
<th>Perform Reinforce Team</th>
<th>Mourn Part Separate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>All agree; tend to make vague ambiguous comments (playing safe, being polite)</td>
<td>Nitpick, polarise challenge</td>
<td>Use ambiguity as an outlet for dissent</td>
<td>Strong agreements as to the task at hand and the group now make decisions by consensus.</td>
<td>What happens now?</td>
</tr>
<tr>
<td>Morale</td>
<td>Am I in this group?</td>
<td>Who controls?</td>
<td>Am I comfortable in this group? How close do I want to get?</td>
<td>Conflict improves our answers; conflict helps build trust.</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.3: The Stages of Group Evolution (Woods, 1994 p.5/10)
If the groups are aware that there are certain stages that groups work through in order to function it may help alleviate some future anxiety. It is also useful for students to realise that the emotions that they are experiencing are normal to group work. Above all however, students should be aware that the transition to PBL is not easy and that they are expected to take responsibility for their learning.

Problem-based learning necessitates the use of group work. The most prepared students will still encounter grievances and complaints. Grabinger and Duffield (1998) list the following as the most common grievances students associate with group work:

- the problem of the non-participant;
- the problem of the participant who “knows everything”;
- the problem of the person who does not pull their weight;
- how to assign an even number of hours; and
- how to counter / manage the negative person.

Facilitators need to make it clear to students that they must also take responsibility for the functionality of their group. Grabinger and Duffield (1998) have found a four-step process to be effective. They stipulate that this approach needs to be initiated in the first class:

- Students are asked to write down five things that they dislike about working in small groups.
• The second step is to ask students to share their lists. The most common complaints are then listed and the students are then required to propose a method to deal with each complaint.

• The third step sees the large group being split into small groups that are based on personalities and geographic locations.

• The final step in the process requires each group to develop a plan to deal with the potential problems that were identified and each team member signs off on the policies nominated.

It is emphasised to the groups that each team is responsible for communicating amongst themselves to deal with any problems that may arise. The strategy of discussing potential problems and creating team policies for dealing with any potential problems can prevent problems from occurring (Grabinger & Duffield 1998). Students must also realise that not all conflicts are bad. Woods (1994) states that from conflict decisions can often be reached.

With an understanding of the above stages associated with PBL and group work itself the transition process from the lecture-tutorial mode to PBL can be smoother for all concerned. Some students will take to PBL with ease while others will be frustrated and offer resistance to the changeover. The facilitator of PBL will need to reassure students that it is a method of learning that the research shows will benefit them because students learn by doing, not just watching and listening to lecture content.
Summary of the Theoretical Underpinnings of the KBC Project

A proposal for an alternative teacher education pathway in initial teacher preparation known as the Knowledge Building Community Project was investigated. The purpose of the KBC Project is to explore its value as an integrated-curricula model for preservice teacher education. This model was made up of three components/principles for learning which should interact together as a basis for continuous learning: (1) Community Learning; (2) School-based Learning; and (3) Problem-based learning. This thesis will explore how this alternative model for initial teacher education using the three sources for learning as a base impacted on the students’ relationships, perceptions and learning experiences during their involvement in the KBC project throughout 1999-2000. In the next chapter, a grounded theory methodology will be proposed to address the purpose of the study.
Chapter Four: Methodology

Introduction

With its multiple layers and predominant human interactions any research conducted within the KBC Project was best suited to a qualititative approach. Qualitative research is an umbrella concept covering several forms of inquiry that help us to understand or explain a social phenomenon without disrupting the natural setting (Merriam, 1998). Tesch (1990) stated that there are over forty different types of qualitative research, and that interchangeable terms are often used. These terms include naturalistic inquiry, interpretative research, field study, participant observation, narrative inquiry, inductive research, case study, and ethnography. Quantitative inquiry relies on prespecified intent, compared to the naturalistic or qualitative inquiry which is "evolutionary with a problem statement, a design, interview questions and interpretations, developing and changing along the way" (Glesne & Peshkin, 1992, p. 6). The following citation details succinctly why qualitative methods and the KBC Project dovetailed together.

Qualitative methodologies refer to research procedures which produce descriptive data: people's own written or spoken words and observable behaviour. This approach, as we see it, directs itself at settings and the individuals within those settings holistically. That is, the subject of the study, be it an organisation or an individual, is not reduced to an isolated variable or to a hypothesis, but is viewed instead as part of a
whole. The methods by which we study people of necessity affects how we view them. When we reduce people to statistical aggregates, we lose sight of the subjective nature of human behaviour.

(Bogdan & Taylor, 1975, p. 4)

The research design was intent on capturing the “spoken words and observable behaviour” of the KBC students. As stated in Chapter One it was the aim of this research to understand the nature of the relationships, what it meant to be a student teacher involved in this project and to explain what happened to the students as learners in this alternative mode of teacher education known as the KBC Project. These understandings did not grow from a single set of interviews or observations rather it was an iterative process. Essentially it was necessary to determine what the KBC Project meant for the students involved - how it impacted on their education, and what were its advantages or disadvantages. This aspect again reinforces the decision to use naturalistic inquiry.

Naturalistic inquiry situates the researcher with humans in an effort to capitalise on those attributes that are uniquely human. This means that a social dynamic is created between researcher and participants where both structured and unstructured dialogue enables understanding to be created. In the context of this research study this understanding dealt with the students’ perceptions of what it meant to be a student in the KBC Project. The social dynamic that was created and the degree of trust that was placed in the "human as instrument" (Lincoln & Guba, 1985) cannot be underestimated. This level of trust is paramount in naturalistic inquiry.
Seeing, hearing and describing the student voice(s) does not equate to an understanding or implicit knowledge about what has been said. In naturalistic inquiry it is through an engagement with the data that a representation or understanding can only be hoped to be achieved. However, as previously stated this study enabled a participant observer role to be undertaken and it was this role that allowed for more than the “cover-story” version of events. Being in a position where one was privy to dialogue that at best sometimes equated to gossip as well as the formal thoughts and observable actions of the students meant that both sides of the story were being viewed. This has meant that the constructions that have been created have been done so with confidence. ‘Subjects’ in interviews will often tell the researcher what it is that they feel the researcher wants to hear. Being in a position of seeing and hearing both sides of the story meant being directly, not passively, engaged in the social, class and in-school experiences of the KBC students.

Qualitative researchers believe that since humans are conscious of their own behaviour, then the thoughts, feelings and perceptions of the informants are vital. How people attach meaning and what meanings they attach is the basis of their behaviour. Only qualitative methods such as participant observation and unstructured interviewing permit access to individual meaning in the context of ongoing daily lives.

(Burns, 1995, p. 238)

The KBC Project and the students that took part in it in 1999-2000 provided an undeniably rich data source. This data was captured through an interactive and dynamic partnership between the students and this researcher as they went about their "daily life".
Design of the Study

The crux of this study was pinned on the overarching research question: "What happens to preservice teachers when they undertake the KBC Project in the Faculty of Education at the University of Wollongong? This question was posed in order to understand the relationships, the perceptions and the KBC students' experiences of learning. As stated above, qualitative methodology was chosen but in particular it was the intent to use grounded theory. Grounded theory was chosen to capture the experiences of the KBC Project from the student perspective, because this method allows for encompassment of "social process, social structure and social interactions" (Annells, 1997a, p. 177). Grounded theory attempts therefore to explain human behaviour and develop theory (Streubert & Carpenter, 1995; Morse & Field, 1996; Benoliel, 1996). The development of a grounded theory will identify and explain the nature of those factors that support or hinder a preservice teacher's learning as they embark upon their teacher training in the alternative model of teacher education known as the KBC Project at the University of Wollongong.

Grounded theory was at the forefront of the "qualitative revolution" (Denzin & Lincoln. 1994, p. ix). It was first proposed and developed by Barney Glaser and the late Anselm Strauss in 1967 as a discovery-orientated approach to the development of theory in sociology (Rennie, 1998). The grounded theory methodology derives its name from the practice of generating theory from research which is "grounded" in data (Babchuk, 1996).
The purpose of grounded theory is to develop a theoretical analysis of the data that fits the data and has relevance to the area of the study. The procedures within the method are then aimed to further theory development. Traditional research design generates data, not theory, to test existing theories by logically deducing hypotheses from them. By offering a set of systematic procedures, grounded theory enables qualitative researchers to generate ideas that may be later verified through traditional logico-deductive methods.

(Charmaz, 1995, p. 48)

Grounded theory is a recognised concept that is related to a research process that serves a systematic set of procedures which aim to provide a theory about basic social processes (Dey, 1999; Miller & Fredericks, 1999). Grounded theory has become the paradigm of choice in much of the qualitative research being conducted in nursing, education, (Miller & Fredericks, 1999) community psychology (Rennie, 1998) behavioural medicine (Pilowsky, 1993) and psychotherapy (Polkinghorne, 1994).

In 1967 the original monograph by Glaser and Strauss was written as a polemic against the traditional hypothetico-deductive, speculative theory building of the research practices used in the sociological context (Locke, 2001). The specific purposes of “The Discovery of Grounded Theory” (1967) are reflected in the following strategies:

...to encourage researchers to use their intellectual imagination and creativity to develop theories relating to their areas of inquiry; to suggest methods for doing so; to offer criteria to evaluate the worth of discovered theory; and to propose an alternative rhetoric, that of
chapter four - methodology

generation, to balance out the rhetoric of justification featured in journal articles and monographs. (Locke, 2001, p. 34)

What grounded theory should or should not be has become contested from within and without. The creators of grounded theory disagreed on certain procedural aspects of the methodology (Babchuk, 1996; Rennie, 1998). Babchuk (1996) identifies epistemological and methodological differences between Glaser's and Strauss' versions of grounded theory. He states that Glaser is more committed to the principles and practices of the qualitative paradigm, and that Glaser views grounded theory as a more laissez-faire operation, which is flexible and guided by the informants. In an interview conducted for the Grounded Theory Institute (Online accessed 2001) Glaser insists that a researcher must tolerate confusion, demonstrate patience and trust in the emergence of the theory from the data. He states that grounded theory discovers what is relevant and illustrates what is going on and he insists that grounded theory demonstrates what people do naturally.

Babchuk (1996) states that Strauss was more concerned with producing a detailed description of the cultural scene. Strauss placed a great deal of emphasis on grounded theory retaining "canons of good science" such as replicability, generalisability, precision, significance and verification. These tenets would suggest a closer relationship to the traditional quantitative doctrines.

Annells (1997a) attempted to compare and contrast how the original creators of grounded theory now differ in their views of the theory. She states that the key to understanding their differences is "to realise that there is an underpinning
neopositivist view that a real reality awaits apprehension and this reality emerges as the inquiry progresses” (p. 124). The following table contrasts the intended product of two grounded theory methods and the precursors to discovering that reality:

<table>
<thead>
<tr>
<th>Focusing on:</th>
<th>Glaser &amp; Strauss’ Classic Grounded Theory</th>
<th>Strauss &amp; Corbin’s Grounded Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>A substantive area</td>
<td>A phenomenon</td>
<td></td>
</tr>
<tr>
<td>Aiming to:</td>
<td>Generate an inductive grounded theory</td>
<td>Develop an inductive grounded theory</td>
</tr>
<tr>
<td>Commencing with:</td>
<td>A general area of interest</td>
<td>A pre-identified problem or curiosity and a sensitising question</td>
</tr>
<tr>
<td>Through use of the method:</td>
<td>A grounded basic problem emerges</td>
<td>Development of grounded question/s</td>
</tr>
<tr>
<td></td>
<td>Grounded question/s emerge</td>
<td>Developing and testing grounded hypotheses regarding a social process</td>
</tr>
<tr>
<td></td>
<td>A grounded basic social process emerges</td>
<td></td>
</tr>
<tr>
<td>Underpinned by:</td>
<td>Symbolic interactionism</td>
<td>Strauss’ theory of continual permutations of action.</td>
</tr>
<tr>
<td>Resulting in:</td>
<td>Generated grounded hypotheses</td>
<td>Some degree of verified grounded theory</td>
</tr>
<tr>
<td>Leading to:</td>
<td>Experimental or survey research resulting in a verified grounded theory, or limited application as a provisional theory when there is ‘fit’ to a situation</td>
<td>An understanding with direct pragmatic application – problem management</td>
</tr>
</tbody>
</table>

Table 4.1 Grounded theory methodology contrasts between Glaser & Strauss and Strass & Corbin (Annells, 1997a)

As identified above there are two major modes of grounded theory. However, there are other methods of applying grounded theory for the informed inquirer to choose from. Over the years grounded theory has been criticised for boring readers with methodology instead of allowing the stories of the respondents to emerge. Conrad (1990) and Reissman (1990) suggest that “fracturing the data” in grounded theory research might limit understanding because grounded theorists...
aim for analysis rather than the portrayal of subjects’ experience in its fullness. Charmaz (2000) states that ‘fracturing the data’ means creating codes and categories as the researcher defines themes within the data and that this method risks “separating the experience from the experiencing subject, the meaning from the story, and the viewer from the viewed” (p. 521).

Charmaz (2000) adds to the debate on grounded theory by proposing constructivist grounded theory and the following is the definition offered:

Constructivist grounded theory celebrates firsthand knowledge of empirical worlds, takes a middle ground between postmodernism and positivism, and offers accessible methods for taking qualitative research into the 21st century. Constructivism assumes the relativism of multiple social realities, recognises the mutual creation of knowledge by the viewer and the viewed, and aims toward interpretative understanding of subjects’ meanings (Guba & Lincoln, 1994; Schwandt, 2000)...A constructivist approach to grounded theory reaffirms studying people in their natural settings and redirects qualitative research away from positivism.

(Charmaz, 2000, p. 510)

By adopting a constructivist grounded theory approach, the researcher can move into the realm of interpretative social science. A constructivist grounded theory fosters the development of qualitative traditions because it focuses on the study of the experience and those who lived it. The experience and those who lived it in relation to this research project are the experience/s of the students in regards to the relationships they formed, their perceptions of what it meant to be in the KBC Project and the influences on their learning as KBC students. Table 4.2 below is a
comparison of the classic grounded theory proposed by Glaser and Strauss (1967) and constructivist grounded theory proposed by Charmaz (2000):

<table>
<thead>
<tr>
<th></th>
<th><strong>Glaser &amp; Strauss’ Classic Grounded Theory</strong></th>
<th><strong>Constructivist Grounded Theory proposed by Charmaz</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Focusing on:</td>
<td>A substantive area</td>
<td>The study of the experience</td>
</tr>
<tr>
<td>Aiming to:</td>
<td><em>Generate</em> an inductive grounded theory</td>
<td>Seek meaning of the experience/s of the participants i.e. interpretative social science</td>
</tr>
<tr>
<td>Commencing with:</td>
<td>A general area of interest</td>
<td>A general area of interest</td>
</tr>
<tr>
<td>Through use of the method:</td>
<td>A grounded basic problem emerges</td>
<td><strong>Development</strong> of a relationship with the participants that aims to go beyond surface meaning - “intimate familiarity”</td>
</tr>
<tr>
<td></td>
<td>Grounded question/s emerge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A grounded basic social process emerges</td>
<td></td>
</tr>
<tr>
<td>Underpinned by:</td>
<td>Symbolic interactionism</td>
<td>Recognition that the viewer creates the data and ensuing analysis through an interaction with the viewed</td>
</tr>
<tr>
<td>Resulting in:</td>
<td><em>Generated</em> grounded hypotheses</td>
<td>An interpretation of how subjects construct their realities</td>
</tr>
<tr>
<td>Leading to:</td>
<td>Experimental or survey research resulting in a verified grounded theory, or limited application as a provisional theory when there is ‘fit’ to a situation</td>
<td>An understanding of the experience from the standpoint of those who lived it</td>
</tr>
</tbody>
</table>

Table 4.2 Grounded Theory methodology proposed by Glaser & the Constructivist Grounded Theory proposed by Charmaz

Constructivist grounded theory emphasises that it is ideal for studying people in their natural settings thus making it a tailor-made methodological approach for the KBC Project. “A constructivist grounded theory recognises that the viewer creates the data and ensuing analysis through interaction with the viewed” (Charmaz, 2000, p. 523).
The question then arises as to how one carries out or accomplishes this approach. How does a researcher develop a constructivist grounded theory? How are the data collection and analysis phases shaped? To reiterate the aim of constructivist grounded theory is to seek meaning from both respondents' meanings (in this situation the KBC students) and the researcher's meanings. Charmaz (2000) states that to carry out this task the researcher must go further than surface meanings or presumed meanings and search out “views, values, acts and facts” (p.525).

A constructivist approach necessitates a relationship with respondents in which they can cast their stories in their terms. It means listening to their stories with openness to feeling and experience... A one-shot interview lends itself to a partial, sanitised view of experience, cleaned up for public discourse. The very structure of an interview may preclude private thoughts and feelings emerging. Such a structure reinforces whatever proclivities a respondent has to tell only the public version of the story. Researchers' sustained involvement with research participants lessens these problems”.

(Charmaz, 2000, p. 525)

Charmaz (2000) stated that if constructivist grounded theory is carried out effectively rich data or stories will emerge. It is therefore timely at this point, without becoming too involved or sidetracked into literary definitions, to define “what is a story” in terms of qualitative research.

As alluded to above the side effect of any rigorous scientific research can be that it quite often moves away from the human experience. Narrative and story telling are intimately related terms that are increasingly becoming linked with ideas
about the nature of human experience and how experience may be studied (Clandinin & Connelly, 1999). The use of stories has the ability to capture certain richness that science or mathematical formulae cannot. From the beginning of time stories have been mediums that have been used to preserve and transmit culture (Michaels & Walsh, 1994). These authors state that stories contain all that is precious to people, "religion, history, science, philosophy and education" (p. 76). Scholes (1981, 1982) says that a story is a "telling or recounting of a string of events" (p. 59).

A narration is the symbolic presentation of a sequence of events connected by subject matter and related by time. Without temporal relation we have only a list. A telephone directory is a list, but we can give it a strong push in the direction of a narrative by adding the word, "begat" between the first and second entries and the words "who begat" after each successive entry until the end.

(Scholes, 1981, p. 205)

The example of transforming the telephone book into narrative reveals that a story or narrative is an event that has an implicit or explicit observer or witness who tells or recounts the events. In the case of an educational study such as this research project the storyteller is the researcher. Scholes (1981, 1982) also argues that a story is a special kind of narrative, he states:

Any set of events that can be sequenced and related can also be narrated: stages in the growth of a plant, the progress of a disease, the painting of a picture, the building of an automobile, the wrecking of an automobile, or the erosion of a stone. (1981, p. 205)
From the above citation Carter (1993) notes that stories therefore consist of "events, characters and settings arranged in a temporal sequence" (p. 6). Martin (1986) says that stories are a means of "understanding life" (p. 7). Neimeyer and Raskin, (2000) suggests that a more general function of the storied approach is to "establish continuity of meaning in the client's lived experience" (p. 212). Thus stories have the ability to capture, interpret and connect the complexity of the phenomenon being studied.

The purpose of this constructivist grounded theory was to describe and explain the nature of the relationship/s between an alternative mode of program delivery and the professional learning and development of its pioneer. Søren Kierkegaard (in Frank, 1997) suggests that “life is lived forward but understood backwards”. These words capture the idea that the experiences of the pioneer students would shape the recommendations and changes for future KBC students. By encouraging the students to tell their stories allows for an interpretation and analysis of their experiences to evolve. As a storyteller, evidence that is gathered is reviewed, reinterpreted and reframed (Lysaght, 2000).

Study Sample

The students of the KBC Project of 1999 were a readily available sample. All 22 pioneer students of the 1999 cohort were informed of this research project and by the governing rules of the Office of Research at the University of Wollongong each were issued with consent forms (see section Ethical Issues and
Responsibility). Whilst the whole group was involved in the study it was impossible to follow all students at all school sites. Therefore, in school data were gathered at one school involving six students the decision to choose this school site was based on its close proximity to the university. In other aspects of the study, all students featured throughout this research study in interviews and via e-mail communication were selected as representatives of the KBC student group. The makeup of this group is a proportionate sample of the whole, i.e. age and gender composition. The females mentioned throughout this study, range in age from eighteen to forty years, whilst the two males were one school-leaver and a mature age student aged eighteen and forty-five respectively.

Data Gathering Methods

As stated, the underlying methodological approach was constructivist grounded theory therefore the data collection strategies needed to develop for the reader an understanding of the relationships, perceptions and learning experiences of the KBC students involved.

Dialogue - Structured and Unstructured

Interview questions that were posed to the KBC students needed to be open-ended. The result of this strategy was that more often than not the data were collected for this research project through open dialogue.
Qualitative interviewing is a way of finding out what others feel and think about their worlds. Through qualitative interviews you can understand experiences and reconstruct events in which you did not participate. (Rubin & Rubin, 1995, p. 1)

As this indicates, interviews allow the researcher to explore and attempt to understand the events that the participants have experienced. Interviews differ from normal conversations in that the interviewer guides the conversation. Interview questions will reflect the information that the participants are supplying or what the researcher needs to learn. The use of interviewing to acquire information is so extensive that it has been said that we live in an “interview society” (Atkinson & Silverman, 1997). Rubin and Rubin (1995) suggest that an interview is constructed through the use of three categories of questions; main questions, probes and follow-up-questions.

Prior to the commencement of the interview the researcher prepares a set of main questions. The function of these questions is to begin and guide the conversation. The main questions may change during the course of the research, as the researcher learns what to ask (Rubin & Rubin, 1995). When responses lack specific detail or clarity the interviewer needs to probe or request further information. The use of probing questions not only elicits further information but also signals to the interviewee that the researcher is listening. The follow-up questions pertain to any themes that have emerged during the course of the interview.
Although it cannot be denied that the interview is a form of conversation it is very much a structured dialogue. The usual approach is explained below:

Someone asks a question and another person responds. It is an activity steeped in our cultural codes and modes of intuitive and spontaneous interpretations. With the research interview, conversation has been transformed into a research tool. (Gudmundsdottir, 1996, p. 2)

This form of interview and response scenario was not the method of choice for this project. Brown, (1998) says that participants in the structured interview are protected by the very structure of the interview because their responses are controlled and limited, digression is discouraged by the interviewer and responses are kept to those which are predetermined as the area of relevance. Mishler (1986) says that the research interview must be viewed as more than just a tool for information gathering but as a site where partners meet and converse and through which meaning is jointly constructed. He views the answers to questions as stories or narratives and says that the development of a good rapport between both parties will enable a shared meaning to develop.

With this in mind, and working on Connelly and Clandinin's (1990) idea that narrative is both the phenomenon and the method because the words of the research subjects are organised into the narrative, the use of the unstructured interview with open-ended questions became the most prevalent and optimal format in this research project. The unstructured interview can provide a greater breadth of data because of its qualitative nature (Fontana & Frey, 2000, p. 652).
Brown (1998) sees the contrast between the structured and the unstructured interview in the following way:

In the unstructured interview all our efforts as participants in shared conversations, as hearers of stories, are directed to creating an atmosphere not unlike that at the end of a good dinner party. Where our co-participant - the storyteller - is encouraged to share insights, understandings and experiences with a sympathetic, supportive non-judgemental listener. We don't stop the participant and tell them that their response is inappropriate, irrelevant, incorrect - we keep the interested facilitator expression, the constant eye contact, the supportive murmurings and as a result we gather a wealth of understandings that may otherwise go unspoken. Implicit knowledge becomes explicit. (Brown, 1998, p.1)

This was the principal method adopted for this research project, but with the adjunct that this was not just a story-telling event and the primary motive behind the encounter was to gather research data. The students liked the informal conversations; they were always happy to talk and share and were never self-conscious of this researcher or of the tape recorder that was always present. These unstructured conversations would normally occur during lunch breaks, at university or at the schools where the students were working. It was not unusual to be approached by the students and asked if I had my tape recorder with me because they had a story that they wanted to share. Such was the trust that had been developed between the participants and myself.

As mentioned above, a small audiotape recorder was used to capture the dialogue that transpired between the students and myself. In an ordinary conversation no
record is kept of what is said, but when conducting research it is imperative to maintain a record of what is said in order to be able to complete the research report. For this study interviews both structured and, predominantly, unstructured were recorded using a hand-held tape recorder. The choice of a tape recorder far outweighed the use of a video-recorder, which, although useful for capturing body language, can often create a situation where the camera’s presence makes the interviewee uncomfortable. The tape recorder used here was small and unobtrusive and did not make the students feel uncomfortable.

Recording interviews on audiotape helps get the material down in an accurate and retrievable form. Tapes keep until you get a chance to transcribe them...taping allows the interviewer to concentrate on what is being said and plan follow-up questions.

(Rubin & Rubin, 1995, p. 126)

Although often considered a negative in using audiotape, transcribing is an enforced method of making the researcher familiar with the data. The transcription process assists the researcher to identify the emerging trends, themes and concepts.

E-mail Correspondence: A Virtual Necessity

The use of electronic communication for this research project proved to be an invaluable, convenient and popular tool with both the participants and this researcher. Electronic communication has moved from a limited group of users to the masses (Tao & Reinking, 1996). In 1969 four computers were linked to a
primitive Internet; by 2001 any accurate estimate of the number of people using the Internet is at best described as a controversial guess. Zakon guesstimates that the number may range between one and six billion (Accessed April 2001). However he does state that there are 120 000 000 Internet hosts (a computer system with registered Internet provider address). The increase in the number of computers connected to the Internet confirms the view that this communication medium is very powerful. (Lillington, 1999) describes it “as having a logic, a momentum, and a force of its own”. The use of e-mail is the most common service of the Internet (Mann & Stewart, 2000).

The Internet makes it possible for a number of types of computer-mediated-communication (CMC).

Real-time ‘chat’, or synchronous CMC refers to an interchange of messages between two or more users simultaneously logged on at different computer terminals. Asynchronous CMC, the feature of most e-mail messaging systems allows users to type extended messages which are electronically transmitted to recipients who can read, reply, print, forward or file them at their own leisure.

(Mann & Stewart, 2000, p. 2)

With the expansion of the Internet, e-mail correspondence has therefore become part of our culture and this meant that when it was not possible to engage in dialogue with the students the use of e-mail correspondence became a very reliable and popular tool for data collection. The students stated that the use of e-mail was by far the most convenient method of data collection. They said that being able to read and think about questions 'posted' to them enabled them to take
the time to think about their replies. This meant that the replies or thoughts were not rushed as they had the advantage of 'think time'. The use of e-mail meant the students could reply or send stories that they wanted to share at any time of the day. It was not uncommon to receive e-mails that had been posted very late at night. It was always a highlight to turn the computer on in the morning and read the midnight e-mails! These late night postings allowed a wonderful insight into the students' thoughts and study patterns. The students would also use e-mail to send stories about their day(s) at school. These reflections were an absolute bonus as it was not possible to attend more than one school site.

The following is an example of one of these school-day reflections sent via late night e-mail. This KBC student was working in a K/1 composite class and had previously been doing isolated lessons, observing and investigating in her role as an educational anthropologist.

Today was fully freaky. But it was good. There was a casual teacher there while my mentor teacher did Inservice all day. As the casual teacher didn't really know the routine she told the children that I would be taking them! So then I had to teach handwriting, take them to library, do poetry, do news, weather, then do art then science, I was a real teacher full on for the whole day. And I sort of even successfully dealt with the boy-who-captures-lizards-and-traps-them-in-his-bag. So it was a very stressed filled sort of day.

The poetry lesson was probably my best. We read a poem about boats, then made origami sailing ships and canoes. I thought I would cater for some different learning styles. So we all made the boats together in a circle, with me giving explicit instructions and everyone following,
and then I gave them the choice of either doing some decorating of the boats with straws and coloured paper and sticky tape and stuff, or following me to do more boats. You know it actually worked!

So I was happy as a young lark (for about five minutes) but then what seemed like 50 million kids came up to me and said “I can't find my recess” “Johnnie hit me” “I feel sick” “I miss Mummy” so then I had a nervous breakdown and died! (Siobhan: e-mail 25/5/99)

The richness of the above data allows the reader an insight into the reality of Siobhan’s day as a First Year preservice teacher. The insight into Siobhan's day captured the highs and lows that she felt as she embarked on her first sequence of lessons. The advantage of this form of data is that it was sent in her own time after her chaotic day and when she had had enough time to reflect. Through her reflection she had realised that she had coped and managed not only several different lessons but a wide range of behavioural issues as well. The reader has been able to share in a poignant learning experience from the standpoint of the person who experienced the learning.

As well as the personal e-mail correspondence that the students undertook there was another forum available to all the students in the KBC Project. This asynchronous chat space was designed to capture honest and unsolicited reflections from the participants involved in this study. The asynchronous forum (DISCUS) was used to support community discussion. This allowed for individual discussion, intergroup, and intragroup discussion as well as lecturer input. Students could access the forum either from the KBC homeroom, campus computer laboratories or from their home computers. Students gave permission
for their messages to be downloaded and again were aware that others would be able to read their messages. During the first three weeks, twenty out twenty-two students made two to three entries on the discussion space. Of these, thirteen used on-campus computers and the remainder used their home computers. The two who were reluctant to participate were concerned about placing their opinions on public view, however by week five one was participating on a weekly basis. Although the DISCUS space had the option of writing anonymously the other maintained her reluctance and made only five brief entries all session (Ferry, Kiggins, Hoban & Lockyer, 2000).

A third format of CMC that the KBC students adopted was a synchronous discussion space. One group of students who were working at the same school site but whose homes were widely separated decided to use a synchronous discussion space known on the Internet as ICQ (‘I Seek You’) that they downloaded from the World Wide Web. This group of students would inform this researcher what time they would be online and were using ICQ. Being able to 'lurk' in the background and read the discussion that was taking place proved to be another valuable data source as it allowed an insight into how this particular group went about organising and planning for their group tasks.

The following is an extract from an ICQ conversation. There were four members online; Fran was informing these members of the latest thoughts that she and Katherine had had since the group left the school at 4.00pm. I too was online. Significantly though, this extract highlights that the group were aware and accepting of the fact that there was a researcher in the background.
Fran: Katherine dropped me home today and we had a talk in the car on the way. We talked about giving the group some more structure and setting tasks, because time is moving and we are not on top of things.

Claire: Hi Julie
Fran: Julie, I am getting used to having you as a sounding board. I hope you don't mind just tell me to stop if you would like to I won't mind. You may not be part of our school group but you are the furniture. We are getting used to having you around. (ICQ communication: 28/4/99)

The Research Journal

The research journal that was kept as part of this research project was an integral and valuable tool. Its purpose was to allow conversations with myself to take place. The value of keeping a research journal cannot be underestimated and is as much emotional as it is analytical. The journal allowed for personal notes to be recorded; it was a space where this researcher could express private thoughts, concerns or gripes. In fact the journal became an escape. In a research project such as the KBC Project where the researcher is working closely with the participants a personal space such as the research journal provides a retreat from the surrounding whirl of activities. However the significance of keeping a research journal is not only for emotional security (Hitchcock & Hughes, 1995); it becomes a reflective tool that enables the researcher to step back and revisit events that have occurred. The entries in a research journal or diary often provide the basis for the generation of new ideas and future theoretical directions or
emerging observable trends. It should be emphasised that there is a difference between the research journal and field notes.

Field Notes

Field notes are the notes taken by the researcher as a result of watching and listening; field notes are regarded as raw data; field notes serve as a reminder of the events that took place in the field. The field notes can be the primary recording tool for the qualitative researcher (Glesne & Peshkin, 1992). These notes, log or journal become filled with descriptions of people, places, reflections, conversations, and times, dates, events, and notes about patterns that may be emerging. The form that the field notes take is at the discretion of the researcher. What is important however is that field notes are taken.

As a researcher the field notebook should be carried at all times and where prudent, observations, comments or the like should be recorded. If it is not possible to record what is going on, Lofland (1971) states that mental notes should be taken and written up as soon as possible. Field notes should be descriptive and analytical. The researcher needs to be accurate and to avoid judgmental statements. Field notes should capture the setting and therefore enable easy recall of the events that took place within the setting.

Your eyes, ears and hands join forces to capture the details of a setting in your field notes, particularly early on in your fieldwork, when you are trying to capture an overall picture of the setting and its people.
Through note taking you reflect on the appropriateness of your problem statement and become increasingly focused.

(Glesne & Peshkin, 1992, p. 48)

Included in field notes are analytic notes. These are the notes that are often referred to as “observer’s comments”. These notes are often recorded at the end of an observation session when the qualitative researcher writes down his or her reflections, comments or feelings. Glaser and Strauss (1967) refer to this method as writing “memos” to you.

The following procedures were adopted for field notes collection, and were based on suggestions put forward by Lofland (1971).

1. Notes were recorded as quickly as possible after observation. This factor is important as the quantity of information forgotten is very slight over a short period of time but accelerates quickly as more time passes.
2. The need to be disciplined to write notes quickly after an observation was essential.
3. The notes were detailed enough in order to summon up for one, months later, a reasonably vivid picture of any described event.

Participant Observation

The use of observation further capitalises on the decision to use the human as instrument. The utilisation of observation strategies allows direct personal
observation of the actions and behaviours of the participants and hence the subsequent recording of those observations into field notes for later analysis. Observation also provides for validation and corroboration of the messages received in interviews (Robson, 1993). This three-way strategy is referred to as triangulation (see Data Checking).

There are various degrees to which a researcher can ‘observe’. This variation is often referred to as the participant-observation continuum (Bogdan & Biklen, 1992; Glesne & Peshkin, 1992). Being at the scene and observing helps develop understanding. Participant-observation provides for learning first hand how the actions of the participants correspond to their words. The participant-observation continuum ranges from mostly observation to mostly participation (Glesne & Peshkin, 1992). In this study the situation was not one where the observations took place with the researcher cloistered away behind a two-way glass.

Observations were attended when the participants were in the campus homeroom, situated at their allocated schools and when involved in group problem-solving sessions. As data were collected it was inevitable and necessary to interact with the participants. Bogdan and Biklen (1992) state that small groups are found to be more “open” and willing to “share”.

As you conduct research you participate with the participants in a variety of ways. You joke with them and behave sociably in many ways. You may even help them perform their duties. You do these things, but always for the purpose of promoting your research goal.

(Bogdan & Biklen, 1992, p. 90)
Chapter Four - Methodology

The willingness and openness of most of the KBC students cannot be denied. This access to and availability of such a rich source of data was vitally important here. Of course, maintaining a balance between participation and observation often proved difficult, but always the primary objective of the research goal had to be remembered. At no time was the presence of this researcher ever disguised and students were always aware that their actions and words could form the basis of or appear in the final report.

Bogdan & Biklen (1992) suggest that in order to maintain focus the researcher needs to remember that the "primary purpose in being there is to collect data and always ask the question: How does what I am doing relate to that goal? (p. 90). This question is designed to keep the researcher on the research path. If what you find yourself doing as a researcher does not relate to collecting data it may be a warning that as a researcher you are slipping away from that role. The above question does not mean that a friendly rapport cannot be established; it serves solely as a device to help the researcher maintain effective data collection strategies.

This 'closeness' may sit uncomfortably with researchers who are more familiar with the use of quantitative collection tools, but if a naturalistic inquirer chooses to remain distant and aloof s/he runs the risk of capturing cold and subjective data. Blumer (1975) states that establishing rapport serves to understand the 'subjects' from their own frame of reference.
To try and catch the interpretative process by remaining aloof as a so-called "objective" observer and refusing to take the role of the acting unit is to risk the worst kind of subjectivism. The objective observer is likely to fill in the process of interpretation with his own surmises in place of catching the process as it occurs in the experience of the acting unit which uses it. (p. 6).

The strength of observational techniques is reiterated by Burns (1994) when he states:

They make possible (the) record of behaviour as it occurs. Such observation can also serve to elicit from people their definition of reality and the organising constraints of their world (pp. 262, 276).

Being upfront with the students of the KBC Project meant that the students were observed in a wide range of situations and various emotional states. Being new to group work, PBL and the school culture meant that the students went through a variety of stressful beginnings. One of these stressful situations was evident when one of the school groups was grappling with the first problem package. Being in a position to observe and then record their actions in the research journal was a definite advantage of participant observation (See Appendix 1).

Being privy to a range of emotional situations is advantageous as it is impossible to elicit raw human emotion from a survey or the like. Detailed field and research journal entries allow for easy recall of events months after the events have taken place. The more descriptions are detailed the more that certain identifiable attributes about the day or the event can be easily recalled.
Ethical Issues and Responsibility

A qualitative study such as this meant that there were times when in my capacity of researcher (and in 2000 as facilitator) I was privy to the actions and expressions of the KBC students. I was with the students every day they were on campus and for some students everyday they were in their chosen school. The data that have been collected are therefore the story of the students' lives and their learning experiences during those times. In exposing their feelings, expressions, needs, wants and anxieties in the public arena certain ethical issues and responsibilities needed to be addressed.

At the beginning of the semester the preservice students were informed that the work they were undertaking as part of the KBC Project would be forming the basis of a research project. In accordance with the University of Wollongong's Ethics Department protocol each member of the KBC class was given an information sheet and a consent form and invited to participate. These forms stipulated that participation in the research was voluntary; the forms emphasised the fact that the students were free to refuse to participate and that they were free to withdraw from the research at any time. In accordance with University of Wollongong policy, if a student did refuse to participate or withdrew consent it would have in no way affected their treatment or relationship with the KBC Project team, the Faculty of Education or the University of Wollongong. All KBC students gave their written consent to the project. To date no student has requested that his or her data be withdrawn. However, written consent does not give the researcher the permission to abuse this contract.
Anonymity is an ethical concern and as such it was an issue that was addressed very early in this research. The students stated from the outset that they wanted to be named. They did not wish to be anonymous. The students were proud of the fact that they were the first KBC cohort of students. They took this role seriously and felt that their comments would help in the future planning of KBC. Secondary offers to provide pseudonyms have been rejected with responses such as the following:

Why? I have never even thought about that. We are who we are. We know who we are. We are the KBC. (Fran: e-mail 6/7/99)

The above response was not atypical and Siobhan confirmed Fran's feelings when she said:

No you don't have to change it, unless you want to change it, if you do then I would like to be Lucy. (Siobhan: e-mail 7/9/00)

However, as part of the agreement with the Ethics Department of the UOW and the Department of Education and Training, no participating school, teacher or child has been identified or named in this study.

As a participant observer the role of confidante was often bestowed upon me and therefore decisions about sensitive and personal aspects of the lives of the KBC students had to made. The privacy of the students was maintained and keeping this trust once again served to extract quality data that pertained to the research focus. Bar-On (in Josselson, 1996) affirms the responsibility of the researcher in
dealing with sensitive and personal aspects of people's lives in the course of research

...we hold the meaning of people's lives in our hands. Our success will be gratifying, but our failures may be irreversible. (p. 20)

It was a privilege to share in the trials, tribulations and success of the students involved in the KBC Project and at all times their welfare and privacy was of primary concern.

The Issue of Bias

The methods undertaken in this research project are not unique; they are simply a format for the provision of insights from the participants. Naturalistic inquiry offers explanations which have been considered and reflected upon. These explanations arise from the mutual understandings and a knowledge of who the participants are and where they are and the meanings they give to their experience (Rogers, 1999).

All research is open to bias. This may arise from the selection of the topic itself, the wording of the research questions, the approach taken during the course of the interviews or even in the method of data analysis. If this is the situation then it is safe to say that bias can occur in any element of the research study. The issue of bias is a major concern of qualitative research. Therefore the qualitative researcher must identify his/her biases early in the study.
By identifying one’s biases, one can see easily where the questions that guide the study are crafted...as we try to make sense of our social world and give meaning to what we do as researchers, we continually raise awareness of our own biases.


When biases are identified the researcher is aware of the kind of data they are looking for which may or may not conflict with the presuppositions that have been made. Presuppositions are those views that are subconsciously held by the researcher. Kaplan (1964) argues that all inquiry is grounded in the presuppositions about the topic being researched.

Rapport and Friendship

Although the use of unstructured interviewing dominated this research project, establishing an understanding of the KBC students’ experiences in the environment of the KBC Project was the central aim. Therefore a certain style of rapport was generated between the students and this researcher. Zigarmi & Zigarmi, (1978) stated that friendship should be avoided with research participants. Such a terse directive as this is hard to follow. Fontana and Frey (2000) state that being able to view the situation from the respondents’ viewpoint derives from the creation of rapport. They state that this is preferable to “superimposing the academic world upon them” (p. 655). They go onto say that it is necessary to place an adjunct to this advice concerning the real possibility of losing objectivity by “going native”. This refers to the researcher who forgoes their academic role by losing their distance and winds up being the spokesperson
for the group being studied. It was critical here to maintain an open access to and from the students and the danger of losing objectivity was real. However, the nature of the research dictated that this researcher was required to get to know these students. Hansen (1976) challenged the concern of objectivity when he stated:

That I did not remain fully detached from the flow of Danish life might be seen as a failure in my role as objective analyst. Yet to understand the subtle dynamics of Danish behaviour required as detailed a knowledge of the individual Danes as I had the capacity to acquire. Access to this information was made possible by friendship, and once established that relationship imposed standards of behaviour at least as compelling (to me) as the rules of my discipline.

(pp 131-132)

Like Hansen (1976) in the quotation above a friendship was established between the students and this researcher throughout 1999-2000. It should be reiterated at this point that at no time was the purpose to my being in the same place as the students ever hidden. Interviews and the stories that the students shared along with their e-mail correspondence verified the observations that were made in the field.

In 2000 when the dual role of KBC facilitator and researcher was assumed it became difficult to sustain the same kind of relationship that had been created during 1999. It became important to assume a new professional stance. At first the students were wary of this new role and the “willingness and openness” among the students to supply data appeared to “dry-up” early in 2000. However, within a
few weeks the hand written notes and e-mails started to once again arrive. Although the style of face-to-face contact had changed and it was no longer possible to sit and share all the stories, the majority of the students still wanted the KBC story to be told. This research project was still the vehicle for that story to be shared with the wider community and as such the participating students once again contributed to its construction. Just as I had had to assume 'two hats', it soon became obvious that the students were able to do the same. The ability of the students to differentiate between the role of student and research participant added to the uniqueness of this research project.

Data Analysis

Data is the substance of things hoped for, the evidence of things not seen
King James. (cited in Lincoln & Guba. 1985)

Once the data are collected using the chosen data-gathering methods, it is essential to extract from the collected material any underlying themes, issues and concepts that are within the data and that will be required for the researcher's focus questions or area of study. Data that have been collected must be analysed. In order to gain the pertinent understanding the researcher must go through a process known as data analysis. Understanding the data and understanding how to perform effective data analysis is elusive and does not come easily.

Data analysis is a process of sorting what has been collected. As data is amassed it can soon grow into a huge quantity of unstructured material; interviews, field notes, survey material, video recordings and the like. As it builds up the need for a systematic analysis of material such as the above becomes evident or the risk of
losing quality data is great. The analysis comes as the researcher works with the
data, and breaks them down into manageable parts and begins to look for patterns
or emerging trends. “Data analysis moves you from the rambling pages of
description to those of products” (Bogdan & Biklen, 1992, p.153).

Bogdan and Biklen (1992) ask their readers to imagine the floor of a gymnasium
covered with toys, then tell the reader to imagine walking through the gymnasium
to start to sort the toys into piles. The suggested piles could range from country of
manufacture, colour, size, or the material they are made from. This analogy is
provided to reflect the process that a qualitative researcher must go through to
develop a system necessary to organise data, but unfortunately the task of data
organisation and analysis is not as clear-cut as the sorting of toys. The qualitative
researcher is in fact looking for patterns, themes, consistencies and exceptions to
the rule. As these features emerge from the data they are identified as codes and
categories and become formally labelled by the researcher. This is referred to as
an inductive approach because the data are being explored in terms of both the
general and particular units of meaning displayed within them (Hitchcock &
Hughes, 1995, p, 296).

The codes and categories that are chosen will reflect the research question and
attempt to make sense of the data that have been gathered. The more the data are
read by the researcher the more familiar the researcher will become with them.
Certain words and phrases, speech patterns, subjects, influences and behaviours
may all start to repeat and therefore begin to stand out. Hence the first step in
analysing data is for the researcher to be familiar with the collected data.
With an understanding of the kind of story that was being sought for this research it was necessary to focus on how this story evolved. At all times a major focus of the data analysis was to avoid distancing the reader from the experience by superimposing a plethora of technical terms or jargon that is often associated with objectivist (or classical) grounded theory.

The first analytic phase of the research consists of coding the data (Charmaz, 1995). Coding is the most common system employed by qualitative researchers when it comes time to analyse data. The purpose of coding is to break down data, to identify meanings, discover relationships and to begin analysis (Hitchcock & Hughes, 1995). Coding has been described as simply the process of categorising, sorting, examining, comparing, and conceptualising data (Charmaz, 1994; Straus & Corbin, 1994). Researchers can code and recode data a number of times (Glaser & Strauss, 1967), but in short it is about defining what the data are all about.

The code emerges as the data are studied. In constructivist grounded theory when data are analysed and a code emerges the researcher returns to the respondent/s and asks specific questions around the new category. “Coding is the pivotal link between collecting data and developing an emergent theory to explain these data” (Charmaz, 1995). For example here when it was evident that the students were grappling with too many new experiences it was necessary to question them about how they were feeling at that time and how they were managing in order for their lived experience to be the focus of the report.
Coding can be a long and laborious process. It is a task that involves reading and going over notes until the researcher starts to grasp the major themes. Burns (1995) says that beginning coding early will help the researcher focus on emerging themes as they develop. It is necessary to stress that coding is not a summary of events but a conceptualising of the data collected.

**Beginning the Coding Process**

In order to begin coding, the data underwent the process known as line-by-line coding. This process enables the researcher to define the actions and events as they see them and keeps the researcher close to the data. Line-by-line coding begins the data analysis from the ground up (Charmaz, 1995). From the standpoint of grounded theory each idea should earn its way into the analysis (Glaser, 1978). The following questions as proposed by Charmaz (1995) guided the process of line-by-line coding:

- What is going on?
- What is this person/s saying?
- What was s/he doing?
- How does the context serve to support, maintain, impede or change these actions or statements?

The following is an example of line-by-line coding
Since I have been in the classroom with my two mentors, I have gained a much greater respect for kindergarten teachers. These two women are so fantastic. They seem to have so much energy and are always so vibrant. They have this amazing way with the kids and a great sense of humour. (Which I realise is most important when teaching kindergarten.)

I guess I always thought of teaching as going into a classroom with lesson preparation plus a well-prepared lesson and teaching kids. But after watching my mentors it's so much more. They put so much energy into everything and keep the kid's attention the whole time. I think it's this that makes it so exhausting.

That's something else I didn't realise. After my very first day at the school, I was pooped, and I didn't even do anything. It is just so exhausting and demanding.

With respect to Barry & King's list of roles, I haven't really seen many examples of my mentors being a counsellor or nurse etc. Much of what I have seen relates to the teaching, i.e. motivating and rewarding.

My view of the role of the teacher has changed dramatically.

Carrying out coding and analysis such as the above helped to develop thought processes, and areas that needed further investigation. Importantly though, conceptual codes were identified and these then enabled the students to engage in narrative that would be representative of the emerging constructivist grounded theory. Line-by-line coding enables a researcher to make decisions about what kinds of data need to be collected next. From the excerpt above it was possible to follow up how other students were dealing with the transition from university student to teacher education student, the reality shock of teaching, teaching strategies and how other students were attempting to link theory to practice.

From the line-by-line coding the data collection and subsequent coding becomes more focused. Remerging line-by-line codes are used to sift through larger pieces of data. Focused coding will capture, synthesise and help the researcher understand the main themes in the statement, the codes are kept active (i.e. to
reflect what people are doing or what is happening) and close to the data (Charmaz, 1995). Figure 4.2 shows how the same excerpt has been treated using focused coding.

| teaching strategies | Since I have been in the classroom with my two mentors, I have gained a much greater respect for kindergarten teachers. These two women are so fantastic. They seem to have so much energy and are always so vibrant. They have this amazing way with the kids and a great sense of humour. (Which I realise is most important when teaching kindergarten.)
| reality shock | I guess I always thought of teaching as going into a classroom with a well-prepared lesson and teaching kids. But after watching my mentors it's so much more. They put so much energy into everything and keep the kid's attention the whole time. I think it's this that makes it so exhausting.
| linking theory to practice | That's something else I didn't realise. After my very first day at the school, I was pooped, and I didn't even do anything. It is just so exhausting and demanding. With respect to Barry & King's list of roles, I haven't really seen many examples of my mentors being a counsellor or nurse etc. Much of what I have seen relates to the teaching, i.e. motivating and rewarding. My view of the role of the teacher has changed dramatically.

Figure 4.2 KBC Data Analysis Example: Focused coding in operation

The focused codes above were reduced again and written under the category heading of “An Introduction to a New Culture”. This process ensured that the experiences that were being witnessed remained in the foreground. For example in the analysis of the events and experiences from Semester One 1999, the other categories that emerged were: “Building a Community”, “An Early Threat”, “Too Many News”, “The Implementation Dip”, “A Question of Dynamics”, “Rebuilding the Community” and “The End of the Beginning”. These categories emerged from the single question “what happened to the students that were enrolled in an alternative model of teacher education? and the sub questions that a researcher asks when undertaking coding of the data. The main question allowed for observation to begin but then generated further questions that allowed those
involved to explain what it was that they were experiencing and learning as students in an alternative model of teacher education.

**Data Trustworthiness**

Merriam (1998) states that research is concerned with producing valid and reliable knowledge in an ethical manner. The question therefore is, "how can a reader or consumer of research results know that the research is trustworthy?" To show trustworthiness there must be a level of accountability applied to the research. Assessing the validity and reliability of a qualitative study involves examining its components. In a qualitative study Guba and Lincoln (1981) state that the reader should feel confident that the interviews were conducted reliably, that the data were analysed properly and that the conclusions match the data. Firestone (1987) adds to this by stating that the qualitative study should provide the reader with a depiction in enough detail to show that the author's conclusion makes sense (p.19).

There are several methods available to check for data trustworthiness. It should be remembered however that no matter what strategies are adopted to assess validity in any kind of research "that data do not speak for themselves; there is always an interpreter or translator" (Ratcliffe, 1983, p. 149).
Triangulation

When printed material and other artifacts are combined with observation and interview this practice is what Lancy (1993) refers to as triangulation. The practice of triangulation improves the chance that the data gathered can be proven credible (Lincoln & Guba, 1985). This method may involve using multiple investigators, multiple sources of data or multiple methods to confirm the emerging findings or the use of multiple data collection strategies which increase the confidence and trustworthiness of the data collected (Glesne & Peshkin, 1992). In the KBC research project the use of multiple sources to collect data was employed.

Member checks

This involves taking the data and tentative interpretations back to the people from whom they were derived and asking them if the results were a realistic representation of their experiences. In order to achieve this throughout this research project KBC students were asked to read and comment on their own interview transcripts and five volunteer KBC students (one male and four females) were asked to read the draft chapters of this thesis.

Long-term observation

This is done at the research site and involves repeated observations of the same phenomenon; gathering data over a period of time in order to increase the validity
of the findings. Each day was a different day in the life of this research project and it was not possible to see particular observations repeated. It was however possible to carry out approximately 18 months of observations of the students involved in the KBC Project.

**Researcher’s biases**

This is a clarification of the researcher’s assumptions, worldview and theoretical orientation at the outset of the study (see Personal Presuppositions: Appendix 1).

**Summary**

The writing of the research report on data that emerged from a constructivist grounded theory study will reflect the methodological approach. Charmaz (2000) states the writing should be simple with straightforward ideas that will make the theory readable. The theory becomes embedded in the story. The aim in the following chapters is to take the reader on the path travelled by the pioneer students of the KBC Project. This is necessary because to achieve authenticity it is important for the reader to be convinced that the writer was present in the world where the study took place (Locke, 2001). It is therefore hoped that the written images will allow the reader to gain an understanding of the experiences that the students went through. The tone of the ensuing chapters will allow the reader to view the relationship between the researcher and the respondents, the openness that existed and most importantly the researcher’s participation in the students’ experience without dominance. By staying with the conceptual categories and
allowing the stories to be written around them this thesis remains true to constructivist grounded theory.
Chapter Five: Session One 1999

What Happened to the Students when an Alternative Model of Teacher Education was implemented at the University of Wollongong?

This chapter reports on and discusses the experiences of the twenty-two students enrolled in an alternative model of teacher education. It follows their progress through the first session of the KBC Project. Subsequent chapters will report on their oscillation into the mainstream traditional program and their return in 2000 to the KBC Project as second year students.

The following conceptual diagram depicts the organisation of Chapter Five:

Figure 5.1: Chapter Map
The Structural Details and Design of the KBC Project 1999

Associate Professor Brian Cambourne coordinated the implementation of the KBC Project. A team of four senior lecturers from the Faculty of Education at the University of Wollongong supported Cambourne. The team assembled for the 1999 KBC Project was considered to possess a wide range of experience and expertise for the KBC students.

The students participating in the KBC Project became part of an oscillating model of teacher education. Due to the second learning principle of the KBC Project i.e. school-based learning, it is necessary for the KBC Project to run in the university sessions when practicum experience is offered. Therefore in 1999 the KBC Project ran in the first semester only. The students involved then reverted to the mainstream (lecture/tutorial) traditional program in Session Two. It was expected that due to their involvement in problem-based learning the oscillation between the two programs would benefit the preservice teachers involved in the KBC Project. It was anticipated that through their involvement in the KBC, and in particular PBL they would become independent learners. In the students' third university session (Session One, 2000) the KBC Group reformed; thus the oscillation between the two programs. This oscillation between the two programs continues throughout the three year degree. The rationale behind this pattern stems from financial constraints, practicum timetabling and also it serves as an attempt to prevent elitist attitudes forming both internally and externally in and to the KBC group.
Table 5.1 illustrates the oscillating pattern of study for the KBC students throughout their three year Bachelor of Teaching.

### Session One 1999

<table>
<thead>
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<tr>
<td>KBC</td>
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<td>KBC</td>
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Table 5.1 The Bachelor of Teaching Degree Structure for KBC Students – Session 1 1999

### The Structure

As stated, the KBC model was created within certain constraints, namely Session One practicum and financial restrictions. The model had two parts. The first part of the course ran for 5 weeks and was designed to prepare students to work in a learning community consisting of 4 discrete cohort groups. Fifty hours of course work was designed to provide learning experiences that would allow members of each cohort group to learn to be effective members within their group as well as effective members of other groups. The first part of the course was also intended to prepare students to be ready to take up their role of ‘teaching associate’. During the second part of the course, which ran for ten weeks, students attended their host school for two days per week and attended university for the other three days.

With its multi-dimensional makeup it is easier to understand the operating pattern of KBC Project through the following chronological breakdown:
February 1999

During the 1999 university enrolment period the KBC Project was promoted to prospective students. Four local schools had agreed to take part in the project therefore 24 students were required to participate to enable allocation of four groups of six at each school.

March 1999

When lectures began for students enrolled in the mainstream course, the students involved in the KBC Project were given five weeks of intensive training in:

- the nature and expectations of the course they were about to undertake;
- the skills, processes, understandings, and methods necessary to participate in PBL with emphasis on small group work; and
- developing basic understandings of Primary Education’s Key Learning Areas (KLA) with the focus on mentoring processes, so that they could adopt mentoring roles with 1-3 pupils at the school to which they would be allocated.

During the same period those school-based teachers who agreed to participate met with coordinating lecturers for one or two information sessions to clarify roles and responsibilities of all involved.
April - June 1999

Students began in schools after the 1999 Easter break. The next ten weeks would see the students involved in both school and campus activity. The preservice teachers spent 2 days per week in school. In keeping with the Brown et. al. (1989) model the apprenticeship activities through which the preservice teachers supported the classroom teacher were sequenced in a progressive format. While at school the preservice teachers were engaged in the following roles and activities:

- mentoring small groups of children who may need assistance in a nominated KLA;
- becoming an Educational Researcher. Students conducted an anthropologically-oriented ethnography which aimed to help them understand classroom and school culture; and
- being mentored by the school based teacher.

On non-school-based learning days the KBC students were engaged in the following roles at university:

- as a member of a problem solving team working on the designated problems;
- as a student/learner debriefing with fellow students and coordinating facilitators; and
- as a researcher/reader, building a personal learning portfolio, working on assessment tasks.
At the culmination of Session One the students had a three week winter vacation before returning to campus and the mainstream mode. This was the pattern of delivery for the 1999 KBC Project; the following section will trace the reality of life as a KBC student.

The Preparation Phase

An Introduction to a New Culture!

After almost two years of planning and negotiation, on March 1st 1999 the KBC Project was underway. The recruitment drive for students had been semi-successful. The quota of twenty-four students had not been reached nor was the program over-subscribed. Therefore students were selected not so much on academic merit or suitability to independent learning but on their willingness to participate. The KBC group was made up twenty-two students. The age of the students ranged from 18 years to 45 years and gender composition was three males and nineteen females.

When the group arrived they were nervous, apprehensive individuals. The students were pioneers and indeed should be congratulated for their willingness to venture into the uncharted territory that was the KBC Project. They each had his/her own set of expectations about this alternative mode of delivery and they each had his/her own set of beliefs as to what learning and university study entailed. In a very short space of time it was necessary to convert this
apprehensive group into a cohesive learning community who could take the responsibility for their own learning.

The group showed signs of anxiety and the tendency to want to know everything immediately had to be quelled. One of the first things that the facilitators insisted upon with the group was that they had to agree to limit this. The facilitators insisted that with each day things would become clearer. The KBC Project as already demonstrated is a complex structure. There really was no blame to be attached to these pioneering students for wanting to know "everything". By the end of the first week the students were starting to vocalise their concerns as they started to compare their mode of delivery with the mainstream program. Questions raised included: "If we don't go to lectures how will we get the information we have to get to be successful teachers?" "How can we be sure that we'll learn everything that we're supposed to learn if we don't have the same experiences as our mainstream colleagues?" "How will we know which of the four subjects we're enrolled in we are studying if they are combined into problems?"

The questions being raised were a result of the baggage that the students brought with them. Although the students' ages ranged from school leaver to mature-aged student their prior experiences as learners were all similar. They had evolved from the apprenticeship of observation (Lortie, 1975) and this new venture into PBL was certainly going to stretch their zone of comfort. In personal communication one of the facilitators had this comment about the upsurge of uneasiness that the students were feeling by the end of week one.
Although this is how every group I work with always begins, I still get anxious that I am failing them, that the anxiety levels will get to the degree that I know inhibits any kind of successful learning. I listen to every comment, every question, constantly asking myself, "how can I ease this anxiety without taking ownership of the knowledge away from them?" But I have learned in the past that given the baggage about learning that they bring you can't simply tell them it will work, they will need to experience it. They have to live it. I have wanted to yell "stop being so anxious it will work, trust us" but this is a big ask I know so I have to plan experiences and activities very carefully so that the process that I want them to trust will work. I strongly believe in the process and there is no going back, as there is no comparison.

(Cambourne, B. L., Personal communication, 01/03/99)

The initial week of the KBC Project as indicated in Cambourne’s statement was trying for the facilitators, a fact that did not go unnoticed by this researcher. The field notes from week one 1999 reiterate Cambourne’s interpretations of the week and were recorded thus:

There is so much happening around me like the KBC students and facilitators I too must admit to feeling very anxious. The students are asking me so many questions! Questions such as: how long has this been planned? What other universities do this style of program? What do the students do in the mainstream program? I can feel their anxiousness. I empathise with their anxiety and at the same time admire them for trusting an untried, although pedagogically sound approach for their first semester of university studies. I know that they have gravitated towards me because I was introduced as a postgraduate student. I feel they have heard the word student and therefore feel that I have more in common with them than the facilitators. I however wonder if the facilitating team will be able to
balance their KBC and mainstream commitments? I hope the group get along, what if they can’t work as a team? Will this approach to learning work? Patience and flexibility is going to be a key. Building the community is going to take time. The plans and foundations have been set in place this week and it is going to be a very interesting and complex study.  

(Field notes: 5/3/99)

Katherine captured the feelings of the students when she commented:

Phew! What a week!  

(Informal interview: 5/3/99)

Building a Community

Before problem-based learning (PBL) and school-based learning (SBL) could be attempted it was necessary to build a learning community. The KBC Project was designed so that community learning would support the students as they encountered the other two sources of learning. Thus the establishment of a community atmosphere was initiated from the first day of session. A range of workshop activities were designed to engage students in learning experiences that allowed members to learn to work effectively with all members of the KBC cohort. It was the intention that the students would develop teamwork skills as they acquired problem-solving skills.

In order to enhance the community-learning atmosphere the students were housed in a special ‘home room’. This room was the physical space in which the students and the four lecturers who mediated their learning met for all the activities that were at the core of PBL. The room was supplied with six computers linked to the
Internet. The students very quickly established an ownership of their room by decorating it with work samples and furnishing it with tea and coffee making facilities. It was noticed that the students tended to gravitate to table groupings that were like in age. If a community was to be formed and maintained all students regardless of age or background needed to know and trust each other. Therefore as well as random group allocation each day the students were also encouraged to change seats.

This community atmosphere is just so beneficial to learning because so many people I knew from Sydney University last year spent the first few months by themselves, in lectures, and at lunch. How can you learn when you are upset and lonely? I think we have something really good here, I mean I had made friends at the end of the first day. By the end of the first week of the KBC Project I knew I would never feel lonely I knew I could always find someone to have lunch with

(Siobhan: interview 11/3/99)

During the preparation phase other students of the KBC group also echoed Siobhan's sentiments regarding the community socialisation:

It’s been great. I have loved working in groups. I have had the best time. I have found that by working in a friendly environment you learn more. I think that everyone has different aspects that you can utilise. The mature age students have encountered certain life issues that we haven’t yet, and I think it is good how they are willing to share a lot of that with us

(Skye: informal interview 15/3/99)

A poignant affirmation for the KBC Project and the approach that it was taking came from Kerrie during an interview:
I don’t think I am learning and then I go home and all this stuff comes out. I think where did that come from? It's because we talk. If we have a problem we talk. Yeah it’s true. We had so much fun with our group poster we weren’t afraid to say anything. We talked so much. We hardly ever disagreed at all once someone said something we would go oh yeah that’s a great idea. One of my initial concerns about this course was that my friends weren’t doing it and I thought that I would be on my own but just the opposite has happened and I have made so many friends.  

(Kerrie: E-mail 15/3/99)

Triangulation of data from different sources showed that several common themes emerged. For the students involved it would appear that friendship and community support assisted in their learning. Because they felt comfortable in their environment they learnt through participation in conversation and KBC class activities. The anxiety of the first week had been replaced. Perhaps the most notable of comments regarding the success of the Preparation phase came from Kerrie when she stated how she didn’t realise she was learning until she started to talk about her university day at home!

As the early weeks progressed the students were engaged in intensive learning activities that encompassed the three compulsory subjects of Language Education 1, Education 1 and Curriculum and Pedagogy 1. To complete the course load the students were also enrolled in a subject that was designed specifically for the KBC Project: Introduction to Problem-based Learning. Subject boundaries were blurred and facilitators never said, now we are doing this subject or that. With this blurring of boundaries the delivery of content avoided the fragmentation that was dominant of previous teacher education models. It was this blending of subjects
that assisted the students like those cited above to not only learn but to also form a community.

**An Early Threat!**

Tertiary education is synonymous with marks and grades and unfortunately the KBC students were not spared this somewhat divisive reality. At the culmination of week four the students had their first marked assignment returned. Up until this point the workshop or poster activities had been conducted in class and it was non-graded work. With the first assignment and the issuing of individual marks, the students demonstrated the first glimpses of competitive behaviour. This pinpointed that the community had peaked in week three and that there were now certain elements that were affecting its cohesiveness. Students identified these elements as marks or grades. When marks were attached to group tasks or assigned to individuals the fabric of the KBC was dented.

As the preparation stage drew to a close and the second component of the KBC Project was approaching the students were asked to evaluate this phase of the program. It was interesting to note that the students indicated that *community learning* had been the greatest influence for them thus far. Although they had experienced some minor discontents with marks and competitiveness they had managed to overcome these. However the students were still in the 'honeymoon' phase as they had not really been challenged with PBL content or school-based issues. They were yet to form their permanent SBL groups thus further challenges
lay ahead. Interspersed with the community-learning issues are the observations by the students that relate to the advantages of the KBC style of learning i.e. the benefit of working with people they had begun to trust. This advantage would be what the KBC students clung to when they were midway through their mainstream session.

The School-based Learning Phase

The preparation phase was designed to prepare and assist students to understand their roles of teacher associate and educational anthropologist as well as introduce them to the basics of their core subjects. As the date drew closer for the school component the students were required to form school-based groups. They were encouraged to think carefully as to the makeup of the groups as these groups would be working in close proximity and on assessment tasks for the next ten weeks.

Four local schools in the Wollongong region had agreed to be part of the KBC Project. Their locations saw two to the north and two to the south of the university. This geographic detail became the predominant influencing factor for the school groups' composition. The ramifications of this decision for two of the four groups would prove detrimental.

The groups were formed in the last few days of the preparation phase. These new groups were able to visit their schools for an orientation visit and were issued with
their first major PBL problem only three days before starting in school. This chain of events proved to be a tactical error on the part of the facilitating team. Woods (1994) stated that there is a certain evolutionary pattern that all groups go through on their way to becoming effective functioning groups. The KBC school groups were no different; in the course of the next ten weeks the groups passed and stalled at all these levels. There is nothing wrong or untoward about this except that the KBC groups did not have a clear understanding of this evolution or the knowledge of how to deal with the circumstances they found themselves in.

As stated above, the new school groups were issued their first major PBL task just days prior to entering the schools. The issuing of the PBL task was also an event to be noted. The problem had a literacy focus and was designed so that it could be solved through the school experience however the problem itself was large and its content and assessment requirements technical (see Appendix 3). With the issuing of the problem and the upcoming school experience the second and third learning sources were being implemented. The KBC Project as a teacher education model was beginning to take shape.

However the problem that the students were given to solve whilst in the schools caused many students to question why they had undertaken this strand of learning. The silence that fell on the room for the first time in six weeks with the issuing of the first PBL problem was eerie.

The issuing of their first PBL assessment task resulted in intellectual unrest. Some students immediately began asking questions while other students tried to guess
what the facilitator was thinking. Several students voiced disapproval at having
their questions returned with a question. Even though the students were aware of
the criteria for PBL they needed to be reminded about its structure. The problem
lasted for four weeks and at its culmination two students said:

I can’t say I ‘m sorry that it’s over as it was huge! But I have learnt so
much and I have a teaching resource, which I can keep

(Skye: Informal interview 20/5/99)

When I go back over what we have done in our group work and also
what I have done myself I am just amazed at how much I have learnt
and how far we have traveled

(Linda: E-mail 20/5/99)

The statements from Linda and Skye were positive but were in the minority.
Observations made of the KBC students during this phase revealed that they often
resembled students that were in crisis. School groups were reluctant to share
information that they had with other school groups and then when they did this
caued other school groups to feel anxious because they did not have the same
information. It was here that the facilitators and students alike were both
grappling with the idiosyncrasies of PBL. The students struggled with the problem
and often needed to be redirected. Facilitators struggled with how much
information to give or how to answer the students’ questions. In an informal
interview one facilitator said:

I felt I had a professional responsibility towards the students. I
wrestled with how much information or direction I should give but at
the end of the day I can not sit by and watch the students flounder

(Hoban: informal interview 4/5/99)
The majority of the students felt that the problem was too big and lasted for too long; they felt that it overshadowed and dominated the learning that they were doing at the schools and their life. Siobhan, although a competent student who produced a high quality assessment task for problem one felt tired and drained at the end of the fourth school week. She said:

I'm slowly dying. I am just so tired that I cannot think anymore. I am a zombie. This whole literacy thing is just so enormous. I hate assignments and I am so sick of this problem.

(Siobhan: e-mail 14/5/99)

Siobhan was not alone. In an e-mail from Fran she said that:

Towards the end of this problem phase I just felt sick. I was worried that we would not get it done in time. I had feelings of horror that we were on the wrong track. We wasted so much time with group issues in the first few weeks that meant we then had so much to do in such a short space of time!

(Fran: e-mail 15/5/99)

Following the conclusion of problem phase one the facilitators undertook two courses of action. The students were given a one-week break between the end of the first and the issuing of the second problem task. The second problem was modified so that less material was covered but to a greater depth (see Appendix 4). Although the first problem created intellectual unrest and pushed the students to greater depths of learning it was directly observed how the students' development or understanding about PBL had progressed when the students were handed their second problem package. This issue was not greeted with silence.
Instead students launched immediately into conversations that either related to the planning and presentation or the actual construction of the problem itself. In an interview Jodi stated that:

We were able to accomplish the second problem better as we had more knowledge of how to go about it, and it wasn’t as big as the first one. (Jodi: interview 16/6/99)

Claire however decided that the problem task was more “project” in nature and that the added structure in fact suited her style of learning.

I look at it now that we are simply working on a project together. I am wondering if there is a hidden problem – but I don’t think that there is. The way that we are being assessed suggests that it is a project. I’m happy with that at least there is some direction and in fact this suits my style of learning. (Claire: e-mail 16/6/99)

Jodi and Claire's team quite liked the second problem because it was so structured and straightforward. It even helped them identify their preferred learning style. However other students stated that the second problem was too easy and were disappointed that the second task was "project-based learning". Their opinions were forthright but showed that as students they were beginning to take an ownership and responsibility for their learning.

This problem we've been given, to be honest, is a bummer. It is so not PBL. We did all this work on PBL, and all the research, and all these diagrams of the process during the preparation phase, and now we have no chance to utilise them. What happened to this self-directed,
work it out yourself bizzo? All this is, is really a vague assignment - vague to us, but not to the lecturers who seemingly have very clear ideas on what they want us to do. For example the facilitator the other day in class kept saying that one group was on the right track. The right track? Which one would that be? Every time we learn anything with BC it seems things start to fall into place. But all the other facilitators seem to have very different views on what it means to be doing PBL. And if it's one thing that is important it is unity.

(Siobhan: e-mail 3/6/99)

With regards to problem number two further correspondence confirmed Siobhan's observations. In an e-mail that arrived from Kerrie she simply asked:

In problem two where is the PBL?  

(Kerrie: e-mail 3/6/99)

The field notes from this period of the KBC Project support the views of those students who were disappointed with the degree of structure that was presented with the second problem.

In today's session the students were told what to research and even how to present their findings for the problem dealing with Multiple Intelligences. In the first problem the area was so broad that the students had to determine what not to research. Many students needed guidance and the facilitators were reluctant to supply it now the students have so much guidance that it is almost a full 360° turnaround! This shift in facilitation is yet another indicator that the facilitators have not yet made or completely understood the shift required for PBL facilitation.  

(Field notes: 10/6/99)
These differences in opinions and comments from the students emphasise the fact that the conversion to PBL is not easy. It also confirms Duch's (1995) and White's (1996) comments that one of the hardest aspects concerning PBL is in the writing of the problems. However Siobhan had astutely identified that the facilitators appeared to have different opinions and that there seemed to be a lack of unity between them (see Implementation Dip for a discussion of this situation).

Too Many News!

Equipped with their new problem and in their new groups the students went into the participating schools as new preservice teachers. The wonderful thing about hindsight is that this recipe was obviously loaded with possible complications. As shown above, the students were pushed all the way with the requirements of PBL. But what about the role of a teacher associate as well as the role of group member in a new group with a new problem assessment task?

The SBL component soon became the dominant factor in the KBC students' day. Although they were instructed and prepared as to what they could do as a teacher associate they were principally first year education students. As such it was expected from the rules governing practicum students set down by Faculty that they should also be undertaking some daily teaching. This pressure of existing rules governing the new KBC model meant that the students, in addition to their PBL workload, were now required to write and prepare lesson plans as well as prepare any necessary resources for teaching. The result of course was added
stress and work loads. For some of the more fragile or volatile school groups this added burden placed them on the brink of collapse.

Being a student teacher is not easy. Schools are not simply a conglomeration of buildings and people; they are a myriad of personalities and demands. The preparation phase never fully dealt with this fact. The preparation phase was positive in many aspects but in regards to the realities of the school environment the information provided to the students was selective. Therefore, the students once in the schools suffered 'transition' or 'reality' shock. This phenomenon is common among beginning teachers. The fact that the KBC students had struck reality shock early would only serve to benefit them in the long term.

The following selection of student quotes show how the students were recognising and gaining an increasing degree of knowledge about the culture of schools and how they function:

I knew that it wouldn't really be an easy job to do. But I think that since being in the school environment I have seen that it's even more involved than I first thought. Being in the school has opened my eyes to lots of things. The school culture is something that you can't be prepared for, you have to experience it and be flexible. Teachers see each child and his or her needs as well as the big picture of the needs for the whole class. (Fran: interview 1/6/99)

I had no idea of the preparation, organisation and behind the scenes work that teachers had to do. However a real 'eye opener' for me was how a teacher needs to have a very good understanding of the learning
of the reading and writing processes. And that this would be an ongoing learning process, on my part. Teachers need to keep up to date with the current learning practices. (Linda: interview 28/5/99)

The first thing that I noticed about the teachers in general, was how busy that they actually were. It just baffles me how a teacher can manage to run six different maths groups in a classroom, while maintaining some kind of order, and with most of the children actually learning something. I guess that it is just a skill that has to be learnt over time. However you can't tell children to learn you have to engage them and motivate them. Motivate them and then they might learn!

(Ryan: interview 28/5/99)

I was never aware of the intense preparation months before hand. My mentor was describing what they do to prepare for their program— all the infants' teachers get together before term starts and work out what they are going to do EACH day for the rest of the term! Each day, so far ahead! I kind of thought you worked it out the night before! But having it planned so far in advance would make it a lot easier, and give you direction. (Siobhan: e-mail 20/5/99)

One of the most apparent realisations came from Kerrie when she described a normal day in Kindergarten:

Kindergarten is so demanding there is a constant need for explicit instructions it is just so exhausting! I discovered that even news is structured. I spent one and a half hours just cutting and pasting stencils into the children’s books. When do teachers have time to do this extra stuff? (Kerrie: informal interview 12/5/99)

The above quotes from the KBC students were indicative of the increasing
awareness that the students were describing and reporting in the debriefing sessions back on campus. It would appear that in a very short space of time the students through their immersion in the school culture were able to witness and appreciate the complexity and multiplicity of a teacher’s role. Students were reporting awareness about welfare, programming and planning issues as well as the realisation that schools and teachers are busy places and people. Students were also increasing their awareness that teaching requires skills and practice. And that the art of teaching develops with time. Importantly however, students were gaining an insight and understanding that being a teacher is a commitment and a profession that requires life-long learning. The data from the above students are an indication of the influence and success of SBL (it was according to the students the most successful source of learning).

To support the student’s view concerning the success of the SBL phase, the mentor teachers were asked to report on their experiences as they worked with the KBC students:

The students’ questioning resulted in me being motivated and stimulated to learn or revise theories. The students’ questions reinforced to me that the teaching methods I was using were relevant.

(Margaret: interview 8/8/1999)

The students were making comments and asking questions that as a teacher I have longed to hear because what it did was reassure me that as graduates they were going to be effective teachers

(Jan: interview 9/8/1999)
That the students were questioning the teachers confirmed that they were undertaking their role as an educational anthropologist seriously. The above comments from the mentor teachers confirms that the students' questions concerning teaching theories were either causing them to revise or feel confident about these preservice teachers as graduates corroborates that the students were being active in looking for the links between theory and practice. At another school site the in-school KBC coordinator reported a change in the staff room conversation. He said:

Having the KBC students in the school has led to discussions about teaching philosophies and organisational matters. It's great to hear this kind of professional conversation. It's a far cry from hearing whingeing and whining ... (John: interview 12/7/99)

This *professional dialogue between mentor and mentee* confirms that the SBL experience was positive and influential on the students' career as future teachers. As a mentor teacher Kate states that the chance to be a mentor teacher allowed her to experience professional growth. This form of growth can be viewed as onsite professional development.

The greatest growth for me was being given the opportunity to become a KBC mentor. I thought that the school must have been short of volunteers, then I decided to view it differently, I said to myself we never stop learning and I'll learn alongside my KBC students. You see I am not teaching them anything specifically we are just sharing in experiences, learning, reflecting and evaluating together. (Kate: interview 18/8/99)
As the students and teachers developed strong working relationships, paradoxically, the SBL phase caused a fragmentation of the KBC in the KBC homeroom. The school-based learning component divided the community into four groups. The four groups became competitive and secretive, thus gnawing away at the very fabric of the community that had been established during the preparation phase. This aspect would push the KBC Project into one of its most difficult phases.

The Implementation Dip

When people try to implement something for the first time, things always get worse before they get better”

(Hullan, 1993b p.2)

Although the "implementation dip" is understood as normal, the impact of it was no less severe. Huberman and Miles (1984) believe that a smooth transition in the early phase of change is either a sure sign that not much is being attempted or that what is being implemented is only superficial. This was certainly not the case. The KBC Project had many aspects being attempted at varying degrees and levels.

For all the success of the SBL component it came at a heavy cost, but one from which many lessons would be learnt. Through no fault of their own the students became subjected to too many 'lost' campus days. The SBL phase was structured to encompass the following timetable: Monday and Thursday saw the students attend University for group discussion and work on pending assignments. Thursdays were also seen as an optimal opportunity for SBL debriefing. Tuesday and Wednesday were the set SBL days. However there was a period of
consecutive Mondays where the facilitators were involved in campus-wide industrial action, graduation ceremonies, overseas conferences and a public holiday. The result was that Monday planning was severely disrupted. The students started to say that there was no point coming into university. Soon Thursday attendance rates also began to dwindle, one low point being when only six students attended a Thursday KBC session. The community atmosphere was now completely at risk. School groups started to meet in private to get their work done and other groups saw this as secretive behaviour, until, as human nature dictates, they too started to meet in private. Sharing of ideas and resources between the students was at an all time low.

Each group was having different school-based experiences some of which the students deemed better than their own. This aspect only served to add fuel to an already simmering fire. So jealousy was now added to the mix of community interruptions. Two school groups who were enjoying their SBL immensely and who were not experiencing any group problems said they felt embarrassed and guilty. They said that these feelings were strong enough to influence their decision to remain off campus.

The students were asked to rate how they were feeling at this low point compared to when they started the KBC Project on March 1st. They were asked to give their feelings a score out of 10. The following Figure 5.2 is a graphic representation of where the students felt they were situated.
By May 6th 1999 the students stated that the way they were feeling ranked in the
negatives. One student called out that she could put down "-100". The KBC
students agreed that the above graph was a fairly close representation of their
collective feelings about the KBC Project in early May 1999. No matter what the
score it was very clear that the KBC was in a downward emotional spiral.

A Question of Dynamics

There was a combination of problems that each contributed to the existing climate
in the KBC homeroom, but one of the most significant of these that added to the
students' unrest was their lack of understanding about how groups function. The
school groups were new and they were grappling with a difficult problem in a
new environment; the support that they were used to in the KBC homeroom was
for many reasons dwindling away. Added to this mixture was the fact that the
groups were evolving and the students were not equipped to handle this evolution.
Although the problems and the students’ newness to the school culture contributed to their intellectual unrest, so too did the group work situation. PBL requires students to work in groups to solve problems; the interaction of the three learning sources was to establish a knowledge building community. It was the intention that the community learning source would assist the groups as they worked through the PBL component. As previously noted not all the KBC groups functioned effectively. As the KBC students progressed through their problem packages they also learnt that working in a group was not always an easy task. The function of group work in a project such as this cannot be underestimated as it is central and vital to the success or failure of each member of each group.

For the students to succeed in group work it is absolutely essential for them to have an understanding of group dynamics. "Groups don't start off great, they evolve" (Woods, 1994 p, 5-11). The KBC students did not have this most basic understanding; they expected to "be great" from the outset. In week two of the preparation phase the students were directed to read a certain chapter from their textbook that dealt with group skills. The content of that chapter was not discussed or dealt with at any stage of the preparation phase. This was an error from the facilitating team but compounded by the fact that when asked by this researcher during this “difficult phase” how many students had read this chapter only three (out of twenty-two) indicated that they had.

It was therefore not surprising that the KBC students and the project were on a downward trend. The need to have a basic understanding about group dynamics and in particular the evolutionary stages of forming, storming, norming,
performing and mourning is vital for a project that is so heavily dependent on group work. The students had not had any real or major problems working in groups in the KBC preparation phase because each day the composition of the groups changed and there was no real pressure. Marks were not at stake, the presentation of these tasks was simple, and the range of workshop tasks was considered as 'fun'. Kerrie highlighted this aspect earlier when she stated that "we had so much fun with our group poster...".

The SBL phase in combination with the PBL were no longer 'fun'. School demands required that the students carry out their duties in a professional manner. The allotted marks to the assignment tasks meant that a simple poster created by using flip chart paper and texta colours was not enough. The teaching component of the SBL required preparation of lesson plans and resources. The groups were under pressure. They had passed from 'forming' to 'storming' but did not have the necessary skills to understand that this was both predictable and normal. Sadly however, the groups did not know how to move onto the next stage. As a consequence the groups began to argue internally and the wider effect was felt in the larger community. In an interview Claire described the internal angst that was being experienced in her group:

I felt frustrated that our group had never made the extra effort or taken the time to get to know each other, or spent more time really talking about our group work and the actual problem. We like each other but couldn't seem to get anything done together.

(Claire: interview 1/5/99)
The frustration voiced by Claire was indicative of several groups but more a direct consequence of the timeframe in which the school groups were formed, received their problem, and sent into schools. With such a short turnaround between group allocation and the commencement of SBL the groups had not had enough time to get to know each other. Moreover it reflects that the students did not have a basic understanding of how groups operate. E-mail from Kristen (who was also a member of Claire’s group) confirmed that there was the common element of friendship in the group but that the missing ingredient was an understanding of group skills.

I was having a really good think about our group. I know we all get along but I couldn’t work out why there was nothing happening in our group. We seem to communicate, so why wasn’t it working? In the end I needed to visualise what the finished product was going to be so I started drawing and writing on the whiteboard and then tasks started to emerge. These tasks could then be assigned to each member and this direction really seemed to help. Not having a leader affected our ability to work as a group. (Kristen: e-mail 7/5/99)

In the field notes from this period the following observation of Claire’s group was recorded:

Individually Claire’s group are asking me why can’t they work together to get this job done. They recognised that they were not working as a group and they were quick to blame external factors or privately each other. A variety of answers come to mind for their predicament: there are six very different personalities, no emergent leader, students that are passively sitting and waiting for directions but
overall the group has not got a general understanding about how groups operate or the skills required by group members. When asked not one member of this group had even read the prescribed chapter from Woods (1994).

(Field notes: 9/5/99)

The need for students to have more of an understanding about group work would be an issue that would need to be addressed for future KBC groups.

As alluded to by Siobhan in her comment (3/6/99) about the second problem the students were not the only ones having trouble working in teams. The coordinator for the KBC Project did not want facilitators to treat their time with the KBC students as “just another tutorial”. He expected that as part of the learning community they would be able to spend time in the KBC homeroom. However the facilitators were not solely employed for the KBC Project and as such they did not have the extra time to dedicate to the KBC Project. The facilitators would have liked to have spent more time with the students like the ideal suggested by the coordinator but the reality was that for the majority they could only spend the minimum amount of time that their schedule allowed. This aspect was highlighted by the fact that it took until May 19th 1999 to conduct a team meeting.

The coordinator had hoped that facilitators would share (via e-mail) what they did in their respective KBC sessions with the rest of the team but this also never happened. At the May 19th meeting the facilitators questioned the need to have a team of five lecturers and also mooted that they really needed to understand their roles in this new venture. The facilitating team tended to express their own ideals
and the students soon picked up upon these. Students were quick to ask questions as to why certain facilitators were involved in the KBC Project when they only ever espoused the advantages of or compared the KBC Project to the mainstream program.

A particular low point during this phase came when one facilitator was conducting a mainstream tutorial and a KBC session at the same time in different rooms in the same building and kept running from one group to the other. The facilitators needed to show a sense of unity and especially to convey the same messages. More importantly however is the need for facilitators involved in this kind of a project to adopt new teaching styles, beliefs, attitudes and the desire to be part of a team. These ideals may only be possible when facilitators are employed only for the KBC.

Rebuilding the Community

The ‘difficult’ period or “implementation dip” needed to be arrested. The students were however irritated with the facilitators. They blamed them for the loss of campus time and they blamed them for the intellectual and social unrest that they were feeling. To combat this decline in community morale the facilitators brought in an outside Management Consultant specialising in Team Building to take the students through a series of workshops that addressed the fundamental differences between groups and teams. The workshops were also planned to demonstrate to the students that the problems and issues they were facing were
common and even considered normal when teams work together.

It has been my experience that when groups of individuals work towards common goals and objectives it is necessary for them to understand that this is not an easy undertaking. It is imperative for group members to understand the processes and principles involved in the transition of a group of individuals to a team.

(Stein, P. J., Personal Communication: 27/5/99)

Stein engaged the KBC students in a series of interactive team building exercises that were employed with the simple ideal of getting students to talk and laugh again. The noise and fun that these students were used to from the distant days of the preparation phase needed to be rediscovered. The morning session was obviously enjoyed because the students all went to lunch together. However it was the afternoon session that would prove to be the most cathartic.

The consultant had planned to include more team building skills with particular attention being paid to the stages that a group goes through, i.e. forming, norming, storming, performing and mourning. It was suggested that the group as a whole needed to have a set of 'norms' that were applicable only to them. These norms would be the ground rules for the personal conduct of the whole group. The class discussion created the following set of norms:

- Greet everyone with a smile.
- Support not compete.
- Treat grades in proper perspective.
- Take responsibility for others learning.
• Accept differences.

• Have fun.

• Take responsibility for own commitments.

• Healthy debate is okay - agree to disagree.

The students then initiated a whole-class conversation about the norms that they had just created in particular the reference to support rather than competition. Marina stated that as a school group they did support each other's learning but when they returned to KBC their group felt dominated and disregarded. A fellow member of this group said that she felt guilty that she was having a good time at her school. This explained why on a number of occasions Marina’s entire school group had failed to attend KBC classes. Fran then apologised on behalf of her group who had been experiencing problems and thanked Marina’s team for their support.

This honest exchange appeared to release into the open some of the frustrations that the students had built up as they worked through the first problem. It also allowed students to publicly discuss an entry that had appeared on the KBC asynchronous discussion site (DISCUS) on May 7th 1999. This entry had been placed anonymously and this angered students more than the note’s content.

It is really a shame to see many people being all secretive and competitive. I know that this is all new... but please make an effort to try and limit the competition. We are all filling the vessel of information together...there is no need to slow down this process...this only applies to some KBCers. (Anon: e-mail 7/5/99)
This entry sparked a lot of conversation via the e-mail site but no one until the team rebuilding day had felt confident enough to discuss the concerns that it had raised openly. The group raised the issue that posting anonymous messages was unhealthy and that if people wanted to say something then they should have the courage and community support to do so. Julieann suggested that all anonymous messages did was increase curiosity as to who may have sent them and that their message was often lost.

At the conclusion of the team rebuilding day the students had been alerted to the fact that if they took the time to understand each other's roles in their particular groups then the chances of them functioning efficiently could be greatly improved. The rebuilding day had once again opened the lines of communication and the students left in an obvious buoyant mood.

One of the school groups discussed their own group and the roles they all played in that group just one week after the team building skills workshops. The following discussion took place:

Siobhan: How has our group developed? Where has our group come from?
Sharee: I think our group has developed from being disorganised, and argumentative. The desire to kill one another has passed! To read those PBL books, I thought, “that’s never going to happen” but now we have, it’s happened. We’ve got our dominant characters in our story dare I mention them...Siobhan, and Felikss, and Heather’s pretty dominant when she wants to be, and Kinya.
Siobhan: So technically...all of us?

Sharee: They’re our dominant four...my view is that those four piggy back off each other, they say whatever they think at the moment, the ideas develop from them, and then somehow we get a structured idea at the end. Then we have our lovely Kerri character who is quieter than the rest of us but who thinks about what she’s going to say...she says something and we just (simulates dropping of jaw), and its such a good point. She just summarises what everyone else has said in a clean-cut kind of way. ...

Siobhan: Kerri, what do you think about the roles that each person plays?

Kerrie: Sharee’s role is to get us back on track...she quickly gives us her point...I think our group is more than just a group who work on assignments together...we’re like a family.

Siobhan: It’s what we bring and the experiences that we have and what we talk about within the team. I think we’ve really discovered what strengths and weaknesses each of us has.

Heather: I think our group had a long way to come in some areas...but we’re really getting there now. Today’s been fabulous.

The members of this group felt relieved once this discussion had taken place. This team prior to the above discussion had been observed as disjointed and often argumentative. One of their most common group tasks up to this point (by their own admission) was work as a production line where one student was hole-punching papers, another then placed plastic reinforcements onto the paper before the next person put the sheet into the ring binder. Like the team building exercises the week before the effect of airing their feelings had had a cathartic influence. The team was able to appreciate what each member had to offer and had they not
opened up and voiced their opinions they may never have reached the level of effectiveness that they did.

What the example above illustrates is that for effective functioning teams there needs to be input, guidance and structure by the facilitating staff but also a committed effort on the part of each member of the team. Each member of each team has to be willing to take a risk and show honesty and openness i.e. the principles of CL. As was shown by the above example when such risks are taken the result is often for the betterment of the team.

**The End of the Beginning!**

After the team rebuilding day the KBC students made concerted efforts to keep the community spirit alive. They took time to greet each other, talk and share resources and of particular note was that they were observed to all lunch together on Thursdays. What was disheartening however was that the facilitators never referred to the group norms that the students had set. They never revisited or enquired as to how the students were going in maintaining their norms. This indifference to community learning by some of the facilitators highlighted the fact that even late in the session that they had not made a shift from their traditional tertiary education teaching style.

At the end of the first session of the KBC Project the question, was a knowledge building community formed? needs to be answered. The KBC Project was
diagrammatically represented by three connecting circles each of which represented the three learning sources of the KBC Project. It was stated that a knowledge building community would be formed when the three circles or learning sources intersected. At the end of the first session of the project the students were once again asked for their input. Figure 5.3 represents the reconfiguration that the majority of the students developed and agreed upon:

![Diagram of KBC Project Week 14 Session One](image)

In an interview with Fran and Claire they stated that the reconfiguration of the KBC model was a portrayal of where they finished their first session. Fran stated that the decision to draw the model in the above way for her was based on a number of factors.

I think that drawing the 3 circles already connected was wrong. I think that you should show the circles connected but say that this is the goal. Start by showing them as separate circles, say this is where you are (community learning), this is the school etc. I mean we hadn’t even visited a school so how could it have been connected? PBL & CL are not going to connect until the end and then they may never connect. By putting up the 3 circles we expected that it would simply happen – we were never told that it may not – or that the circles can in fact move. At the moment PBL is not in the picture. Our community,
our school group, are working well in the school learning context but it is not performing PBL because of the problem that we were given. The model must be explained as a dynamic moving thing. The intersection of the three circles is the goal. And it needs to be explained that if you don’t get there it’s okay! (Fran: interview 1/6/99)

Claire supported this comment when she said:

The circles may overlap they may come close, two may connect three may even come together but we shouldn’t have been told that this is what will happen, because when it didn’t it simply added to our stress load because we thought we were doing something wrong.

(Claire: interview 1/6/99)

These students raised some very interesting points and issues that need to be examined more closely. The intersection of the three circles that represent the three learning sources should be seen as the goal for the KBC students. The students said that the learning source of PBL needed to be placed as a single circle. The reason that the students gave for this placement was the design of the problems. They said that the problems actually prevented them from carrying out PBL.

In the preparation phase the students researched PBL. They understood about its origins and the theoretical basis for its conduct. As a result of this research they expected to be doing 'textbook' PBL. However the design of the problems prevented the students from carrying out this style of PBL. It needed to be stressed to the students that the version of PBL that was in use for the KBC Project was a hybrid version that was developed especially for use at the UOW.
This may have counteracted the difficulties that the students grappled with as they worked through the problems. Of the three learning sources presented to the students it cannot be denied that PBL proved to be the most problematic. PBL did however force students to discover their preferred method of learning and this aspect cannot be seen as negative.

With the conclusion to Session One the KBC students appeared physically tired. The assignments had pushed them to levels that they had not imagined when they started their University studies fourteen weeks prior. The friendships among the KBC as a whole and the group relationships that they had established had been tested and by session’s conclusion were still intact. This aspect was particularly evident at the end of the session lunch that the students organised and the plans they were making together for their session break.

The end of session also meant that the students would return after the winter break and resume their studies in the mainstream with the entire cohort of first year primary students. This prospect was daunting for some while others saw it as a chance to meet new people. Working in a close knit community such as the KBC is not easy but it must be reiterated that a school environment is also a close knit community and students must be prepared for the realities of this environment.

The emphasis on community learning was an underlying strength of the KBC Project and within it the students had developed friendships as well as professional working relationships with the other members of the CL triad, the school-based teachers and the KBC facilitators.
Lessons from Session One 1999

As previously illustrated, the KBC Project was diagrammatically represented by three connecting circles each of which represented the three learning sources of the KBC Project. It was stated that a knowledge building community would be formed if the three circles or learning sources intersected. At the conclusion of Session One 1999 the KBC students were asked for their feedback about the three learning sources of the KBC. After discussion amongst the students, the majority of them developed a reconfiguration that saw the learning source of PBL standing alone from the other two learning sources.

Based on this reconfiguration it is clear that the students identified PBL as the learning source that had prevented the true formation of a KBC. Clearly, the three learning sources of community learning, school-based learning and problem-based learning need to be re-examined in an attempt to discover the underlying reasons for this decision.

Community Learning
What was learnt?

The fundamental intention of this learning principle was for the creation of a community of learners. This community consisted of the KBC students, the university facilitators and the school based teachers. It was envisaged that this group would see each other as co-learners. Wenger (1997) said that a community of learners needed to understand that it was a joint enterprise, that all members
needed to understand its function and share the communal resources. In reality the 1999 KBC students did eventually form a community of learners but it was not as simplistic as the above description would have the reader believe. The events of Session One 1999 illustrated that there were many pitfalls along the way before the pioneer students could be called a community of learners. These stumbling blocks can be attributed to a number of factors.

Prior to the commencement of the KBC Project there was little information available for prospective students. The brochure that was available was delivered amongst the many other brochures and forms that students receive when they come to university to enrol in early January. This was a 'hit-and-miss' affair; some students read the information while others were simply overwhelmed by the enrolment process itself and did not seek out any information other than the obvious available study pattern. This resulted in a far less number of students applying for inclusion into the 1999 KBC project. Twelve students applied through the enrolment day brochure handout this number fell far below the required number to form a complete cohort.

In order to establish a 1999 cohort therefore, the KBC facilitators needed to broadcast the KBC at the Faculty of Education Orientation Day, (three days before the commencement of session). This attracted several more students and word of mouth also helped raise the numbers to the minimum required level to form a cohort.
This meant that the students that commenced the 1999 project could not be labelled as ‘elite’ because of their past grades or academic achievements. It also meant that several students chose to do the KBC Project for reasons other than the opportunity of participating in or contributing to a community of learners. Reasons that were eventually elicited from the students for electing the KBC mode centred around the removal of formal written examinations, the hours and days on campus were set and permitted outside university commitments and some thought that being involved in a pioneer project would enhance their employment opportunities.

This group of students then, were diversified in not only their ages and academic backgrounds but in their reasons for wanting to do the KBC Project. Before the first workshop activity had begun the odds against the creation of a learning community were high. The reasons why the group succeeded in the formation of a learning community can be attributed to the personalities involved and a sense of ownership of their project that stemmed from the fact that they were the first KBC group. Although perhaps not elite in terms of academic backgrounds the group soon realised that what they had in terms of resources (homeroom, facilitator and computer to student ratio) was not normal for a university class of twenty-two students. These factors contributed to the eventual formation of the learning community.

Although a written resumé or interview can never guarantee the performance of an individual in a group such as the KBC, the selection process is certainly an area that needs to be scrutinised. In order to do this however, the information that is
available to all intending first year students needs to be easily accessible. This can be achieved by the inclusion of the KBC Project on the Faculty of Education’s web site, as well as inclusion in the printed matter that is distributed to the public, schools and career advisers.

The university semester comprises thirteen weeks therefore the establishment of a community of learners and an understanding of group processes need to be undertaken from the very outset. In Session One 1999 there were many activities in the early weeks that were designed with exactly that purpose in mind, however one of the earliest threats to this neophyte community of learners was encountered four weeks into session when the students had their first graded assignment returned to them. It was at this point that competitive traits emerged. One student was determined to align himself with students who received high marks in an effort to form the “best” school group. In an effort to curb competition among KBC students the KBC facilitators attempted to instigate a pass/fail system to replace the traditional grade system. The Faculty of Education denied this request and subsequent efforts to have a pass/fail system introduced for KBC students.

Therefore the issue of grades is contentious and to this day remains unresolved. What is known however is that grades have the potential of undermining true CL. Therefore a strong and ongoing emphasis has to be set from the beginning of day one of session that outlines the benefits of CL and one way of maintaining group cohesion is that all KBC students have a strong understanding of group dynamics and team work.
A very important lesson that the facilitators learnt was that team building activities needed to be included in the weekly scheduling after the students started in their respective schools. When the school-based learning began it became obvious that the community fragmented into four separate communities. Immediate strategies needed to be employed to counter this. However it was allowed to go unchecked for a period of several weeks. A “band-aid” approach was employed where students were instructed to read a chapter from a book that related to group dynamics. This was not enough. A principal ideal of KBC is linking theory and practice and the maintenance of group cohesion through the development of team skills must also be seen in this way.

“Groups do not start off great” (Woods, 1994, section 5 p. 11) there is an evolutionary process that groups go through and students must be aware of this process from the outset. There were many new experiences for the students in first session 1999 and they needed an understanding that all groups work through the “forming, storming, norming, performing and (in some instances) mourning” (Woods, 1994) process. Had the students been aware of this kind of information and been given the opportunity to discuss it in an open forum it may have reduced the severity of the ‘implementation dip’ that occurred.

The facilitators of the KBC Project had underestimated the impact that the combination of new groups, the newness of the school culture and new PBL problems would have upon each school group and the KBC group as a whole. When the morale and cooperation across groups reached its lowest point, the facilitators realised that they needed a positive strategy to reverse this trend. The
intervention of an outside Management Consultant certainly contributed to the arrest of this “free-fall” of the students’ morale in mid-session. He was able to highlight to the students that what they were going through was ‘normal’ in the life of any group. The students were alerted to the fact that when they understood each other’s roles in their particular groups then the chances of them functioning more efficiently were greatly improved. When the groups were able to appreciate what each member had to offer they opened up and voiced their opinions. What this illustrates is that for effective functioning groups there needs to be input, guidance and structure from the facilitating staff as well as commitment from all students their respective teams. Each member of each team has to be willing to take a risk and show honesty and openness.

To further rectify the “dip” school groups need to be formed early in the session. Group members need to have time to get to know each other’s strengths and weaknesses, work on assignments together and most importantly understand each other’s personalities. This aspect needs to occur before the groups arrive at the school sites. The introduction to school culture is complex. School-based learning groups do not need the added burden of also being in a new group. A function of the school-based learning group is to support each member at the school site.

If the school-based group is confident in its own ability to function then when it is time to rejoin the community back in the KBC homeroom the members of each group should have enough confidence to leave their group and interact with other KBC members. This happened late in Session One 1999, but only after the groups had realised that what they were going through was normal and after each group
had established its own set of ‘norms’. The norms for each group were the basic day-to-day operating guidelines for the group. Although the KBC group never recaptured the initial enthusiasm that was evident in the early weeks of session, the lessons that were learnt were invaluable for students and facilitators alike.

For the learning community triad to be successful it is not just the students who have to make adjustments to their previously held conceptions of learning. Many of the issues that contributed to the decline in student morale can also be attributed to the fact that the facilitators themselves were experiencing difficulty in the shift from their traditional role of lecturer to facilitator. For a lecturer to make this transition successful they too have to be prepared to take risks, allow for a new level of openness and honesty and involve themselves more in the students’ learning process. For some of the 1999 facilitators a total KBC involvement was difficult to sustain due to their commitments in the mainstream program. As much as they wanted to be involved in the activities of the KBC homeroom the time that this demanded could not be given. Often it was the case that the facilitators would start their workshop and were not able to see it through to its conclusion because of their mainstream timetable. The workshop activity would then be left for another facilitator to finish. This was causing a fragmentation that the KBC Project was designed to counteract. It soon became obvious that in order to be a part of the KBC and maintain mainstream commitments flexible timetabling was going to be required.

The other key players in the formation of the learning community were the school-based teachers. The students stated that their help and guidance was
invaluable. The KBC students’ arrival at the school with assignments aimed at linking theory with practice, caused the school-based teachers to state that they had to re-evaluate their own teaching practices. The teachers stated that the KBC students were asking them questions that they had not expected from first year preservice teachers. Thus the co-learning triad was being established.

**What did the Students Learn?**

As the session drew to a close the students started to see that having an understanding of the journey that they had travelled was beneficial to their learning. When the students started to pull together and draw on the community as a whole it was then that they understood the advantages of being in a community triad. As the students grew in confidence as a school group they were able to utilise the expertise that the mentor teachers had to offer in a more productive and efficient manner. When they stopped worrying about marks and grades, and what each individual school group was doing, and realised the value of sharing resources and experiences across the whole KBC community, then the students started to learn the value of a KBC.

At the end of the session the students valued their community and the learning that they had undergone but did not really understand its impact until they returned to the mainstream (lecture and tutorial) mode in Session Two, 1999.
School based Learning
What was learnt?

The school-based learning (SBL) phase was designed to differentiate it from the traditional mainstream practicum. As an alternative teacher education program notable variations could not be delivered only on campus. The term Teacher Associate (TA) was introduced with the intention of changing school-based personnel’s views of the preservice teachers in their schools. It was a deliberate attempt to change the view of the preservice teacher from a student to a future colleague, or an associate.

The arrival of the KBC TA’s into the school sites did not happen without numerous meetings between University facilitators and the Department of Education and Training (DET). Each participating school principal appointed an in school KBC coordinator to oversee the time that the KBC students would be in the school. Before the SBL phase begun an orientation visit was arranged for each school group to meet with the principal and KBC school coordinator. Each school group was also assigned a KBC facilitator that would act as a liaison person and be available for the scheduled weekly meetings between KBC students and coordinators. Thus the triad of community learners would be established and maintained off campus. Therefore the stage was set for what was to be a very important component of the KBC Project.

As previously documented the school based groups were formed just prior to the KBC students starting in schools. This was a mistake when the stages of group
evolution are taken into account but the other most disturbing aspect of this was the fact that the students chose the make-up of their group based on geography!

Students were encouraged to consider whom they wanted to work with over the SBL period of 10 weeks. Suggestions such as compatibility and like interests were offered but the overriding factor that contributed to the school group composition was made according to where students lived, where the schools were situated and how these impacted on travel, child care and work commitments. In three out of the four SBL groups this formula did not prove detrimental to the performance of the group. The fourth school group differed greatly from the other three groups. This SBL group was a mix of personalities, ages and experience that had trouble meeting, collaborating and agreeing on their school investigations and assignment work. They were a loud and vocal group who took 10 weeks to pass through the group evolution stage that Woods (1994) refers to as ‘storming’. However when they finally did take the time to sit and discus their individual strengths and weaknesses they realised that these traits could all be put to a productive use. The irony was that when this realisation was made the group had but one week left in the KBC term.

However there were other tactical errors that made the SBL phase a mixture of success and turbulence. Each school site implemented the KBC Project according to their interpretation and context. This caused angst among the students when they returned to the KBC homeroom. One school in particular provided only one mentor to six KBC students and then she was only available for one of the two days that they were in the school. This of course made these students feel as though they were being disadvantaged, when they heard other students say that
they had one mentor to two students. This one school did not provide the students with a base or home classroom and quite often it was that the students were referred to as 'the visitors', 'the helpers' or 'the ladies' as they went from classroom to classroom observing and offering to help. There had been little communication among the teaching body as a whole and the TA's were left feeling despondent. Although the coordinator and the principal were highly supportive of an alternative program and lent their support by their presence at all weekly meetings it highlighted the fact that what happens at the school site cannot be controlled by the KBC facilitators. Although this school site was supportive at the executive level the classroom teachers were not privy to the same background and philosophical information that pertained to the formation of the KBC. They did not understand why there was a group of preservice teachers coming into their classroom. They were not made aware of the differences between the KBC and mainstream programs.

The actions at this one school site set off a chain of events compounded by human nature. When the students returned to the KBC homeroom and dominated debriefing time by venting their unhappiness with their situation other KBC groups felt guilty that they were having the experience that was anticipated by both KBC students and facilitators alike. The experience at the atypical school made the other SBL groups reluctant to share stories or resources. The experience of this school group highlighted that all school staff needs access to information about the roles and responsibilities of both the mentor and the associate teacher.
Although an information session was held not all staff were able to attend and receive the same information. The information relating to the function of the SBL period and differences of the KBC needs to be uniform. The question of how to access all the participating school staff can be answered by the provision of a handbook that is concise and which details the SBL period. Although information sessions prior to the commencement of the SBL period are the ideal and must be continued for those who can attend it would not be economically possible to release each participating school based teacher from classroom duties to attend such an information session. To ask the teachers to attend outside of school hours would not be supported either by the teachers or their Union.

The other obvious factor to arise from the problems encountered by one particular KBC school group was the need to maintain weekly school liaison visits by the KBC facilitators. These visits allow for not only a presence at the weekly meeting of the learning community triad but if scheduled correctly could coincide with school recess or lunch breaks. At these breaks the University facilitator can be on hand to discuss the KBC Project, with the students, the mentor teachers, and any other interested school staff.

To complete the community of learners off campus the ideal situation would be where the KBC facilitator is situated alongside the KBC student in the mentor teacher’s classroom. In this setting a dialogue can be established between the KBC student and the KBC facilitator relating to the observable practice of the mentor teacher. Again the underpinning need here is that the KBC facilitator has to be free of commitments on campus; therefore time spent at school sites must be
factored into the facilitator’s total teaching load by the Faculty’s Workloads Committee. If the KBC facilitator is available for longer periods at the school site the mentor teacher also has the opportunity to discuss the progress of the TA with the KBC facilitator. If a true University school connection is to be made (and the potential is there with the KBC Project) then the University has to be seen to be supporting the classroom mentor teachers. The KBC facilitators cannot afford mentor teachers to feel as though the onus of teaching the KBC students has been laid solely on them, if this is a learning community then it will be that the University presence in the school based learning period will be highly visible.

The problem at the atypical school site was rectified before the end of the SBL period, by the efforts of the KBC facilitator assigned to the school. It was fortunate that this particular school group had a facilitator in 1999 that was prepared to fulfil his commitments with the school. By the end of the SBL period the school and the KBC students were working in a much improved KBC model. The students gained a homeroom, teaching experience and recognition that they were TA’s not volunteers.

As already discussed mainstream commitments played a major role in destabilising the role of the KBC facilitator on campus and this flowed over to the weekly school visits. Three out of the five KBC facilitators in 1999 simply could not carry out this responsibility. It was fortunate that the school staffs were supporting the students at these schools as they navigated their way through this very new context. The dominant lesson here again relates to issues of staffing and flexibility for KBC facilitators.
The literature has shown that one of the most prevalent problems associated with practicum experiences in the past has been that the preservice teacher commonly only sees the style of one teacher (Veenman, 1984; Northfield, 1993; Field, 1994; Edwards & Collison, 1996). During their time in a practicum school the preservice teacher will quite often feel like a guest in the supervising teacher’s room and in order to pass the practicum will adopt the style of that ‘host’ classroom teacher. The KBC Project was designed to allow students to experience as much of the school as possible. Therefore the KBC students would have a base classroom (usually their mentor’s) but would be rostered to other parts of the school during their in school days. It was here that the KBC facilitating team again met resistance from structures built into the mainstream course.

The Director of Practicum several weeks into the KBC SBL period insisted that the KBC students must be undertaking classroom teaching experience. It was his concern that if they did not undertake any teaching experience then how could they be issued with an end of practicum teaching report. In NSW each preservice teacher must undertake an interview for employment with the DET in the third year of their degree, at this interview they need to produce two teaching reports. This added another demand on the time that the KBC students were now in their respective schools. It was now expected that the KBC students would observe and interview teachers, carry out their PBL assignments, and prepare lesson plans and resources for practice teaching. From the time of their arrival in the schools the students wanted to teach and were only too pleased to undertake this latest challenge but the combination of all the tasks that they had to fulfil was to prove taxing.
The time needed to plan lessons and resources is onerous and when combined with the PBL assessment tasks and attendance on campus for KBC workshops the students were starting to appear physically tired. The problems that the students were researching were difficult and the students were losing interest in them, because they only wanted to teach. The students would return to campus and vocalise that they wanted to be in the school. The intention of the KBC Project was to link theory and practice. This strategy was proving effective when the dialogue and questions that the students were carrying out in the school and the KBC homeroom was examined, it was the method that was going to have to be revised. As it was in 1999 the combination of expectations placed onto the students proved far too demanding. For the long-term survival and future recruitment of students the KBC Project could not allow its students to finish the session in a state of mental and physical exhaustion.

Based on the experiences of the 1999 KBC students a more effective method to improve the theoretical investigations carried out in schools without compromising teaching experiences would need to be developed. A formula was needed that would allow students to experience the link between theory and practice but in a method that would not prove detrimental to their wellbeing.

What did the Students Learn?

The 1999 KBC Project had a built in preparation phase designed to prepare and equip students with the skills required to fulfil their role as a Teacher Associate.
This preparation phase deliberately avoided describing the operation of schools and the role of the classroom teacher. If the students were carrying out their role of educational anthropologist effectively then the students would discover these aspects.

Although the SBL period provided different learning experiences for all the KBC students it was in fact the learning source that provided for an insight into the culture of schools and how schools do business. The students quickly realised that each school is different and that there are certain factors that determine this difference. It cannot be denied that the introduction into the schools caused problems back on campus for the learning community as a whole but as previously discussed these can be attributed to a number of contributing factors that can be expected whenever a new program is implemented.

The SBL period was the learning source that the students rated the most beneficial, because they got to experience the day-to-day operations of the school. For many it was confirmation that they had chosen the right career path. Learning to teach is not easy and nor is being a preservice teacher in a school. For many of the students they experienced a form of reality shock as they started to contemplate the daily work of a classroom teacher. This kind of understanding was considered as a positive outcome for the KBC Project. Research carried out with beginning teachers is littered with stories of ‘transition’ or ‘reality’ shock (Veenman, 1984; Ballantyne, Hansford & Packer, 1995; Kotsier & Wubbels, 1995). It is usually attributed to poor preparation at the preservice teacher stage. The fact that the KBC students were experiencing and understanding this kind of
introduction to teaching can only benefit them as they progress through their teaching degree and when they start as beginning teachers.

As the SBL period progressed the students soon learnt that teaching is a multifaceted job that stretches far beyond the classroom, the curriculum and the commonly coined phrased of "nine-to-three". The students learnt that teaching is demanding on both time and energy, that it requires collaboration, planning, professional problem solving and reflection. When the students started to see the collaboration that takes place in schools in the form of Key Learning Area (KLA) committees and grade partnerships the students started to see the benefit and reasoning behind the need for CL. The students started to realise that teaching is not done in isolation and that the need to be a productive member of a school staff outweighs individual personalities. The students saw different members of staff join forces to plan for various classroom strategies and soon realised that the people on these teams in schools did not necessarily have to be best friends but that they needed to professional as they carried out their work. This realisation would flow back into KBC homeroom and group assignment work.

By being immersed in the context the students started to verbalise and use the language of the profession. They talked about programming, planning for children's needs through assessment, teaching evaluation, structure, the need for ongoing learning, the use of group work in the classroom and the need to use motivation as a learning technique. As well as classroom based observations the KBC students were reporting about issues that related to student welfare, the role of the teacher on playground duty. KBC students started to describe this role as
encompassing that of a policeman, peace broker, nurse, and confidante. Above all the students were learning about classroom management and lesson preparation.

The students also stated that it was necessary to get to know the sub-culture of the children in the schools. The KBC students said that this understanding could allow a development of a learning relationship with the children. The KBC students defined sub-culture as the latest trend that was captivating the children’s interest. As a by-product of their educational anthropology work the students quite often without realising it were relating classroom observations and practice to the work of theorists such as Gardener, Piaget and Vygotsky. The teachers reported that the questions that the students were asking in the school and the classroom were intelligent and far beyond the realm of previous first year students.

Evidence such as that listed above corroborates that this learning source was beneficial at so many levels. As the students started to understand the benefits of CL at both the school and whole group level it can be seen why the students elected to link these learning sources in the reconfigured KBC diagrammatic representation. The combination of CL and SBL proved to be effective despite the number of tactical errors made. Therefore the potential of these learning sources when adjusted and retried will undoubtedly prove equally if not more powerful to preservice teacher learning.
Problem-based learning
What was learnt?

The third and final learning source to be examined is PBL. It was this learning source that the students removed from the conjoined KBC model. The reasons underlying this decision will now be examined.

The literature revealed that problem-based learning has been extensively used in medical and other health professions over the last 30 years (Barrows, 1984, Boud & Feletti, 1991; Margetson, 1994; Woods, 1994). However there was little evidence to support that it had crossed over into teacher education. The examples that were available showed how it had been introduced primarily as a stand-alone subject. Other examples showed how individual academics had decided to convert their subject using the principles of PBL (Hughes, 1998). The literature also revealed that there are many difficulties and challenges that accompany the use of PBL, (especially) during the first attempt (White, 1996).

In the literature Barrows and Tamblyn (1980) stated that the majority of difficulties in the application of PBL were the result of poor understanding by students and staff of the process as a whole. They supplied the following outcomes, which they stated needed to be met for successful implementation of PBL:

- sufficient instructional time;
- absence of a competing instructional program that makes unfair demands on the students;
• preparation of adequate learning resources for self-directed study;
• adequate resource faculty;
• well-defined goals and evaluation techniques that are visible to both faculty and students;
• adequate orientation of faculty and students and
• recurrent faculty workshops (with student participation).

(Barrows & Tamblyn, 1980. p. 189)

Each of these outcomes will be examined in regard to the 1999 KBC Project and its implementation of PBL.

Sufficient instructional time

During the period in session one 1999 referred to as the “Preparation Phase”, the students were employed in workshop activities and research projects that required them to investigate the principles of PBL. They were asked to research where and how PBL was carried out. The result was that the students had a very strong ‘text book’ understanding about PBL. In addition the students were given mock problems to solve. These problems were based on real life situations that could occur in a typical primary school setting. The students worked hard during this phase and as a result were considered ready to meet the challenge of a new and assessable problem package. The major error here of course was the fact that the students did not receive any time to work on a mock problem in their newly formed school groups.
The newly formed school groups had the new problem package issued on their last day on campus prior to the groups commencing in schools. This was obviously not enough time for the groups to prepare how they were going to ‘tackle’ the new problem package. Throughout the timeslot where the students were brainstorming and attempting to deconstruct the new problem the students were silent and struggled with the content of the problem. This was the last day the students had together before they started in their schools and there was a lot happening, the students felt anxious about the pending start of the SBL period and there was the inherent politeness and awkwardness associated with the formation of a new SBL group.

When the students attempted to gain further clarification of the problem all their questions were answered with a question. It proved frustrating. The students who had seen their facilitators up to this point as co-learners were now being told that they were problem solvers and that they needed to work on the problem themselves. Hindsight and reflection being the advantageous tools that they are strongly suggest that this was not the approach that was needed at this point. The students needed time to adjust to their new group, brainstorm the measures that they needed to adopt and time to receive and partake in adequate background research. The preparation phase had been carried out efficiently for six weeks but failed to reach the standard that had been set when this assessable PBL package was issued.
Absence of a competing instructional program that makes unfair demands on the students

This was a positive aspect for the 1999 KBC students. As the first session subjects were conducted entirely within the KBC Project the students did not have to mix KBC with the mainstream delivery pattern. Thus the students were not faced with the problem of trying to juggle lecture and tutorial times with the group demands of PBL. This aspect was reported by Hughes et. al. (1998) as one of the greatest hurdles their students faced because they found it difficult coping with the rigours of the two modes of instruction and the practical constraints such as scheduling. Problem-based learning demands that students involve themselves in a great deal of collaboration between team members, and part-time work commitments and time-tabling restraints often proved quite stressful for the students working in the Hughes et. al. (1998) program.

Preparation of adequate learning resources for self-directed study

The KBC students were provided with suggested titles and Internet web sites to investigate concerning PBL. It soon became obvious however that the actual University library did not have an enormous selection regarding PBL. What few resources the library did have soon became fiercely contested. To enable all the students to peruse the available PBL collection facilitators needed to arrange with the library staff to place these books on Closed Reserve. Each student was issued with the Woods (1994) text but at times there was too much reliance placed onto the chapters in this book.
Adequate resource faculty

As previously stated there were five facilitators aligned to the 1999 KBC yet not all were able to give 100% of their time solely to the KBC students. However other than the school liaison role being under fulfilled the students were in general not compromised when they were on campus.

Well-defined goals and evaluation techniques that are visible to both faculty and students

The first PBL package had the goals or outcomes that they were to achieve listed. Although the list itself appeared daunting the students needed to state which outcomes they believed they had or had not achieved and why. It was explained that the students would not be penalised if they had not achieved an outcome. To maintain a sense of equity between the mainstream and the KBC students these outcomes were the same for both groups enrolled in the core subjects.

The evaluation techniques were structured and each facilitator was made aware of how the PBL package #1 was to be assessed. For the students the assessment strategies were also clearly defined – it would be the enormity of the tasks that would prove the downfall for this problem (see Appendix 3 for the complete facilitator and student guide to PBL package #1).
Adequate orientation of faculty and students

The students were involved in a six-week preparation phase that has been discussed previously but to reiterate was designed to prepare and inform students about the features of PBL. As stated this phase was (until the last day) conducted efficiently and the students had obtained an understanding about PBL, its history and its practice in other tertiary institutions.

It was of course not just the students that required an adequate orientation to PBL, the facilitating team also needed to undergo a retraining and preparation for this new venture. To meet this need the facilitating team attended a two-day workshop conducted by a member from PROBLARC (the centre for PBL at the University of Newcastle). These sessions were informative and provided an insight into the workings of PBL, unfortunately the seminar was held late in February 1999. Armed with a clearer insight into PBL the facilitating team were then left with little time to fully prepare for the mammoth undertaking of a fully integrated course using PBL.

To add to the quality of orientation for the facilitating team and students it would have been advantageous to see a working PBL session by an experienced PBL facilitator.
Recurrent faculty workshops (with student participation)

Since the inception of the KBC Project the participating students and facilitators have provided Faculty workshops that have been designed to share the knowledge that the students have attained. These have taken the form of end of session presentations, poster displays, or lunchtime seminars; to date the attendance by Faculty has been minimal, with only the same small group of supporters attending.

Since the first training workshop attended by the KBC facilitators further instructional workshops by experts in the field have not been sought. The evolving KBC has meant that PBL in the context of the KBC has been redefined. The hybrid version of PBL in use with the KBC succinctly meets the needs of students at UOW and therefore does not meet the guidelines of textbook PBL (this will be discussed further in chapter 9).

Based on Barrows and Tamblyn's (1980) list of indicators the first attempt at implementing PBL in the Faculty of education at UOW was a bittersweet mixture of success and failures. The KBC facilitating team did some things well but then made some strategic mistakes in other areas that would prove detrimental to the smooth progress of the rest of the session.

White (1996) insists that the true test for successful PBL implementation is found in the quality of the problems that the students are given. The first problem package was too large and proved demanding for the neophyte problem-based
learners the facilitators therefore made a decision to drastically modify the second PBL package. When this package was issued the reaction by over half the KBC class was relief while the rest quickly scanned the assignment and agreed that it was not PBL at all. (See Appendix 4 for the complete facilitator and student guide to PBL Package #2). These students were right. The problem had been so greatly modified that it was heavily structured. The intent was to make the back half of the session more user friendly and less demanding on the schools and the KBC students. Several students said that after the research they had conducted into PBL they were so very much looking forward to doing it but to date they had been disappointed. These students stated that problem-based learning had been replaced by “project-based learning”.

The first problem was too big and there were students who had struggled with it and therefore they didn’t mind the more directed and structured second assignment, however for the students who were looking for a challenge they were disappointed. The overall result to be highlighted from this course of action was that for effective implementation of PBL the nature and structure of the problem is the crux.

What did the Students Learn?

The literature stated that students who were engaged in PBL benefited because motivation; relevance and context; higher order thinking, learning how to learn and authenticity were promoted (Duch, 1995; Finkle & Torp, 1995; Novak, 1996). Problem-based learning aims at engaging students to “learn about learning”. Prior
to the commencement of the first KBC students in 1999 the coordinator of the project said that PBL would enable students to:

- initiate active, collaborative, student-centred learning processes;
- develop the problem-solving and self-educational abilities needed to meet the challenges of life and career in increasingly complex classrooms;
- have acquired an integrated knowledge-base structured around real world problems they will face in their future work, community and personal lives;
- engage a challenge (problem, complex task, situation) with initiative and enthusiasm;
- reason effectively, accurately and creatively from an integrated, flexible, useable knowledge base;
- monitor and assess their own adequacy to achieve a desirable outcome given a challenge;
- address their own perceived inadequacies in knowledge and skills efficiently and effectively; and
- collaborate effectively as a member of a team working to achieve a common goal. (Cambourne, 1998a).

Did the 1999 KBC students learn and acquire these key attributes because of their involvement in PBL? Each will be examined in context of the 1999 project.
Initiate active, collaborative, student-centred learning processes

The transition to student-learning processes requires students to disregard any previously held notions or reliance on the teacher as the “fountain of knowledge”. This is not easy and does not happen quickly; students have to develop a certain degree of confidence in themselves as a learner as well as distinguish between collaborative not competitive learning. The 1999 students as detailed in the CL source underwent this transition but not before a very steep learning curve. As previously documented this is an area that requires careful facilitation and guidance, it is not a naturally occurring phenomenon.

Develop the problem-solving and self-educational abilities needed to meet the challenges of life and career in increasingly complex classrooms

There is no question that the students learnt about the complexity of the primary school classroom and the culture of schools. This could be detected in the language that the students used when they returned to the KBC homeroom for debriefing sessions. The students soon spoke about teaching being a career that demanded life long learning. But because of the nature of the problems that the students were issued the students were solely focussed on the ‘made-up’ scenarios rather than the real life issues that surrounded them. The PBL packages that the students were dealing with actually prevented them from carrying out professional and contextual problem solving in the school or the classroom.
Have acquired an integrated knowledge-base structured around real world problems they will face in their future work, community and personal lives

What the students learnt was a way of force fitting their contrived problems into the context where they were situated. Again the language and the dialogue that the students were using demonstrated that they were starting to see that schools were all different and comprised of different problems. Whether or not the strategies that the students developed for use during this phase of their involvement with PBL influenced them in their personal lives remains doubtful. The students were too focused on solving the problems, the due by date, the weighting of the assignments and the end of session.

Engage a challenge (problem, complex task, situation) with initiative and enthusiasm

Certainly throughout the preparation phase the students showed enthusiasm and initiative attacking any workshop assignment with relish and vigour. But the actual problems that made up the assessable component of the session tested this enthusiasm. The first problem was greeted with silence and trepidation. As a greater understanding of it was achieved and each school group developed a plan to ‘solve’ it the students became ‘engaged’ with it but the degree to which this engagement could be measured in terms of enthusiasm is an unknown factor. The second problem allowed those students who had struggled with the first to recapture their enthusiasm because it proved to be less of an onerous task.
Reason effectively, accurately and creatively from an integrated, flexible, useable knowledge base

To understand how each of the compulsory subjects could be integrated and used effectively a basic understanding of each subject was required. This aspect was carried out and the students soon learnt how each subject overlapped to create a knowledge base that they could implement in their problem solving. This understanding allowed the students to start and see the link between theory and practice. The development of an integrated knowledge base meant that the students were not decompartmentalising the subjects in which they were enrolled. This aspect was a particular strength of the KBC Project.

Monitor and assess their own adequacy to achieve a desirable outcome given a challenge

The students knew when they were not on track. Although they had a very clear set of outcomes that they needed to achieve they were also very good at detecting when their group or the whole KBC group was not rising to meet the challenge of a learning community. Messages would appear on the KBC DISCUS space that would chide (or compliment) the performance of the group. As the group became more adept at this skill it was obvious that they were moving into student centred learning and breaking free of any previously held conceptions of learning.

Address their own perceived inadequacies in knowledge and skills efficiently and effectively

This is the key to a KBC or any group that is involved in PBL. When students can recognise the areas where they lack knowledge and skills and have the confidence
to address them suggests that the transition from teacher-centred to student-centred learning has occurred. In a community of learners such as the KBC students should feel secure enough to be able to address areas that they feel they are requiring facilitator or peer input. The enormity of this kind of an undertaking should not be dismissed lightly. Only when students feel secure in their surroundings or the people they are working with can this happen. For it to occur requires a level of trust among peers, and again this relates to a strong understanding of group and team dynamics. In the 1999 KBC Project this aspect was late forthcoming because student groups struggled with their group dynamics. However when each group started to feel secure in their group and trust their fellow team members the propensity to seek information from other groups was more forthcoming and the willingness to share knowledge across groups was increased.

_Collaborate effectively as a member of a team working to achieve a common goal._

Collaboration among the team is definitely a positive by-product of PBL but as demonstrated within CL does not happen without the group having an understanding about effective group dynamics. In order to achieve this the students need to be involved in team building workshops on a regular basis. Once the 1999 KBC students acquired this understanding within their school based groups their collaboration and team skills improved greatly across the whole KBC group.
The above list of attributes proposed by the KBC coordinator is formidable and in the short space of thirteen weeks that the KBC Project had to achieve them hindsight suggests was perhaps an overly ambitious undertaking. It would be foolhardy to suggest that it is possible to attain the above list of attributes from one session’s exposure to PBL. It is obvious that to achieve or master any or all of the above outcomes the KBC students would need to have ongoing experience with PBL. However, that is not to say that the students did not start to achieve in many of the areas that Cambourne (1998a) predicted that having an exposure to PBL would influence.

The students learnt a great deal about schools and their culture, group dynamics and the inherent principles associated with PBL. In the final evaluation of the session what prevented them from linking the third circle in the diagrammatic representation of the KBC model was a combination of several factors. There were the mixed successes and public mistakes of the facilitators, the obvious problems with the actual PBL packages and an underestimation by the students of the distance they had travelled. While it cannot be denied that the problems and mistakes by the facilitators were real the students underestimated the knowledge that they had acquired until they returned to the mainstream. What the relatively short period of thirteen weeks had done was to encourage the students to “learn about learning” but without another mode of program delivery to compare with this was undervalued by the students. The mistakes to do with PBL were facilitator generated and can be attributed by a rush to implement the KBC in 1999 but the students had attained some of the most prevalent principles of PBL ie learning about learning and the ability to link practice to theory. Although the
students did not link the PBL circle does not mean that PBL was an ineffectual influence on their learning.

When the students made their transition to mainstream mode and started to compare how they learnt they realised that PBL had given them an ownership of their learning that they did not feel they had as a student in a mass lecture. This emerging student empowerment was a positive signal for the KBC design team. Although the KBC students redrew the model with the PBL circle removed, as a learning source it was in fact far more influential and powerful than the students had realised.

The lessons that facilitators and students alike learnt from Session One 1999 would form the basis for modifications for future KBC students to follow. The overriding attribute of the KBC process as a whole would in fact prove to be the influence of the community triad (KBC students, facilitators and school-based teachers alike). The development and support of the community triad was an important factor for the KBC Project it allowed the students to learn in a secure environment. It meant that students were not learning in isolation or attending school-based experiences without the support of a colleague.

The following chapter is a discussion and analysis of the findings from the second session of 1999. During this session the KBC students started their mainstream component attending lectures and tutorials both within and outside the Faculty of Education.
Chapter Six: Session Two 1999

The Mainstream Experience

Chapter Five recounted the experiences of the pioneer KBC students as they worked through the first session of their three year Bachelor of Teaching Degree. As first year students enrolled in an alternative teacher education program they did not attend mass lectures or tutorials.

This chapter will examine and discuss the students’ experiences when they rejoined their fellow first year students and became part of a larger group. The structure of this chapter is illustrated below:

![Figure 6.1 Chapter Map](image-url)
Table 6.1 is a diagrammatic representation of where the students were situated in their study pattern in the Bachelor of Teaching degree at the University of Wollongong.

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Table 6.1: The Bachelor of Teaching Degree Structure for KBC Students – Session 2 1999

A Reluctant Acceptance

In July 1999, the KBC students returned to campus after a three week university recess. With the commencement of Session Two the students started their first experience of mainstream university education. The mainstream program follows the traditional lecture-tutorial delivery mode. The students' schedule comprised of three education subjects and one elective subject from any outside faculty. The KBC students chose a range of outside electives including Australian History, Philosophy, Introduction to Public Health and Management studies.

For the majority of the KBC students attending, the first mass lecture for Session Two was their first experience with this style of delivery. Siobhan reported in an e-mail:
Everyone was really worried about tutorials and where you sit in lectures, and how you know when you're supposed to write something down that has been said. After our first lecture everyone said how it was really hard to concentrate.

(Siobhan: e-mail 19/7/99)

The students said that the reason it was hard to concentrate was because of the noise that occurs in a lecture hall.

I couldn't believe all the paper shuffling noises and the chatter; it was really hard to hear and concentrate. I must remember to never sit down the back! (Fran: informal interview 19/7/99)

The field notes from the first lecture also relate to seating arrangements but also to some strange observations of body language that the students were engaging in.

What I thought would happen at the first lecture eventuated! The KBC students were all sitting together. The students were not all seated as 22 in a row but in the friendship groups that emerged in session one. They were scattered from the first row to the back row but they all seemed to appear very low in their seats! Is this a coincidence or a deliberate action? (Field notes: 19/7/99)

The first lecture that the KBC students attended was in Science and Technology. This subject was coordinated by one of the KBC facilitators and this was the aspect that had the students particularly concerned. The students were worried that they would be singled out as KBC students.
In an interview Siobhan was quizzed about this and whether she knew what was going on. Her frankness was surprising:

I was scared the whole time that I would get chosen to answer a question. In fact I was really freaked. The others said they felt the same way, and they deliberately kept their head down to avoid eye contact. I hope that Garry doesn't make any more reference to "people he knows" and "the KBC group" and "PBL" because it just singles us out even more and makes us look like we're buddy-buddy with the lecturers. (Siobhan: informal interview 20/7/99)

The students wanted to fit into the mainstream group without any special attention as they feared that they may have been seen as an elitist group. They quickly learnt the ropes of the mainstream, however it was a reluctant acceptance. One of the greatest differences that the students experienced was that they were now part of a much larger group and the differences that are particular to the KBC Project were not the norm in the mainstream.

The first thing that the students missed was not having a home base. Fran felt as though she was back in high school going from room to room with all her belongings. She said that the only thing missing was the bell! Fran also experienced confusion about the attitudes of some of the students in her tutorials.

There just doesn't seem to be many opportunities to give any input. The students don't seem to want to talk they just want to absorb. I could spend a whole day at university and not utter a single word and no one would know. (Fran: informal interview 1/9/99)
This comment from Fran would suggest that what she was missing in the tutorials was *the support of the community triad* and the interaction that accompanied it. Interaction and discussion was a prevalent factor in the KBC, especially in the first 5 weeks of intensive preparation, which was dominated by discussion and workshop activities.

As Session Two progressed the students started to identify the many differences between the KBC Project and mainstream. Another difference identified by the students was the accessibility to the lecturing staff. As students in a group of 170 it was no longer possible to have the degree and freedom of access to staff that they were used to. The KBC students, school-based teachers and facilitators had been part of a community triad, where learning together was the principle aim. Katherine felt that the greatest problem she was facing was the prospect of formal examinations but she also highlighted the change in student-lecturer dynamics when she said:

> The problem this session is that I am going to be tested on lectures that I have attended. You know the ones where people talk and then you don't hear what the lecturer said? The lecturers rarely wear microphones, and you can't ask them to repeat everything and you feel intimidated to ask for further clarification. It is also difficult to catch the lecturers at the appointed consultation times because often they are not there or there are too many other students waiting to be seen so I just go home!

(Katherine: e-mail 3/9/99)

Within a few weeks the KBC students had realised that they needed to support one another if they were to have the degree of success that they were used to.
They therefore maintained their learning community. In mass lectures the pattern of KBC students sitting in four to five small groups continued. When assignments called for group work or pairs the students chose to work with a student from their KBC community. When asked about this decision several students stated that they wanted to work with other KBC students because they held similar work ethics and they could trust each other to do the required component.

Where is the Learning?

Even though it is only early in session two I don't feel as though I have learnt as much as I did at this same point in KBC. I like the lifestyle of this “normal strand”; getting to meet new people is great but for educational purposes I much prefer the structure of the KBC. 

(Skye: informal interview 10/8/99)

Before the students started in the mainstream mode the majority of them did not have any experience with university so they were not able to make an informed comparison between the two modes of delivery. This situation soon changed and the students were making critical comments and asking valued questions such as the following:

How do people learn in this kind of environment? For the past four weeks I have sat in lectures and tried very hard to comprehend what is being said and how this relates to teaching. I have gone home and read notes and textbooks but still found myself struggling to understand stuff. I am finding it very hard to motivate myself. 

(Kerrie: interview 10/8/99)
The comments made by Kerrie are far removed from the girl who said she went home and found that "stuff just came out" and that she “didn't even realise she was learning” (15/3/99). For Kerrie the *community triad* had been central to her learning. By week four of the mainstream program she admitted that she was struggling to create or maintain any form of personal motivation.

Siobhan stated that the lecture did not allow her to develop any personal engagement with the material that was being presented.

The lecture format is detached in reference to learning. I'm never quite sure when it is that the learning is supposed to occur. And what function the note taking is supposed to hold. Do you take down the notes because it's through them that you become more engaged with the content? Or so that you have them in a book that you can flip back to and be reminded of what the lecture was about? Somehow I think that I need a little more to really become engaged with a topic or a subject. (Siobhan: e-mail 19/7/99)

Siobhan's comments about feeling detached are a reflection of how involved the students were in their learning environment during the KBC Project. It would appear that the learning community generated as part of the KBC Project had given the students an identity. The need to be part of a group, involved and active in their learning, was missing from the mainstream lecture format. This factor became an oft-expressed criticism from the KBC students and would indicate that they had indeed felt a great deal of ownership for both their KBC learning and their KBC group. The above statements appear to have in common that these KBC students have realised that for learning to occur
there needs to be an active role played by the student which maintains motivation and engagement with the content that is vital because learning is more than absorption.

The above comments reflect the perception that life in the mainstream remained static and the KBC students had accepted the mainstream way of doing things. This did not mean however that they always liked what they were doing. Their sentiments remained close to the above themes but what became more evident as the session progressed was the ability of the KBC students to compare the two modes of delivery in a deeper more analytical manner. The students were looking for connections between their university studies and the work of a teacher. It would appear that they were consciously looking for the links between theory and practice.

**Looking for Motivation**

As the students searched for the links between theory and practice it became evident that they were also looking for personal motivation.

Last session during KBC I felt like I was training to be a teacher. I knew why I was at university Everything we did had classroom emphasis. This session it is hard to always focus on the big picture; I feel like I have lost my emerging professional identity.

(Kerrie: interview 12/10/99)

The students stated that the structure of the community and the problems
although difficult, meant they were constantly busy in the KBC session. Kristen stated that not wanting to let her fellow colleagues down was a strong motivator.

My motivation has dropped dramatically this session. I seem to only do work when I have to and do my assignments at the last minute. I guess because there is not much group work happening this session and it's all up to you that you are really only letting yourself down not any one else. It was amazing last session when I think back to KBC I can hardly believe the time and amount of work I put into all the assignments. I think that the support and motivation from fellow students definitely helped.

(Kristen: e-mail 19/9/99)

For Kristen being an independent learner in the mainstream mode meant that no one was relying on her for her contribution and so it was easy to "slacken" off. This attitude was revealed in an interview late in Session Two 1999 with Kinya when she stated:

My driving force for learning this session seems to have somehow vanished. I guess that it is interesting to learn in some subjects such as science and my elective but with the other subjects I don't really have any driving force to learn. Maybe just to pass the exams at the end of the year, or make sure that my marks don't drop too dramatically. Last session I think the driving force for learning was greater because we did our practical work. It was exciting learning things we could take into the classroom with us. I guess with no practice teaching this session and the subjects being more 'theory based' it doesn't seem quite as interesting. I think everyone in KBC was so motivated whereas now the boredom and
lack of motivation seems to rub off other people onto me. When we were solving problems it gave you a greater sense of achievement especially when you really understand what you have been working on and then when you can apply your understandings in the classroom it just seems to stick better.

(Kinya: interview 23/9/99)

Fran echoed Kristen and Kinya's comments about passing the examinations and making sure her marks wouldn't drop "too dramatically". She summarised the focus of mainstream learning and teaching as being examination-centred. Fran showed how the KBC session had practical application at its centre whereas she said the focus of mainstream was passing the examinations.

Knowing that the problems we were solving were real life and that we will be likely to face them, as beginning teachers was an excellent form of motivation for learning. I am finding it harder to make the links and connections this session. The learning seems to be centred on exam content!

(Fran: e-mail 18/10/99)

Among several KBC students the dominant issue towards the end of the session were their grades. In 1999 at the UOW the common practice when marking assignments was to award Pass, Credit, Distinction or High Distinction grades rather than a numerical score. Siobhan said that she liked seeing "high distinctions" on her work when it was returned and felt that it was a good boost for the short term ego but in reality it did not last or really mean a great deal in the "scheme of things". She felt that being able to apply what she had been learning in class was a greater form of satisfaction.
I was reading through my language notes from first session and I actually used it with a boy that I tutor after school it was great to see the theory in action. I could choose to earn money in an easier way than tutoring because it is so much extra work but I am learning so much.  

(Siobhan: interview 13/10/99)

However the irony remained that in the majority of conversations or e-mail correspondence with the KBC students that the topic of marks and grades was always raised. Although the students denied that marks were a possible driving force or motivational factor their presence and the role that they played in the students' second session cannot be dismissed. The following conversation took place during an interview with Ryan and Kinya late in Session Two; each were complaining of incongruities in their grades:

Ryan: I had two Information Technology assignments marked by the same tutor. On the first assignment I got a High Distinction. I was with Julieann waiting to get back the 2nd assignment and she says "Don't worry you can't go from a HD to a pass"... So what did I get a pass! I was so cranky!

Kinya: I can relate to that. Last session I was getting HDs & Ds and the 1st assignment I got back this session was a Pass so I just went home and smashed something!

(Ryan & Kinya: interview 13/10/99)

When asked why they were placing so much emphasis on their marks these students said it was because they felt that employers would judge them by the marks or grades on their final university transcript. Kinya stated that she really didn't care what she got as a mark as long as she was learning, but she knew
they were a benchmark that could be used to judge her in her bid to be employed as a teacher.

If I am learning then I don't really care what the marks are. The only reason I care about marks is because of how they look on a transcript and in an interview they can be used to judge you.

(Kinya: interview 13/10/99)

Although the students often complained about their assignment grades, when they were pushed to really explain why grades were important to them they stated it was because of the outside importance placed on them. These first year students had their eyes fixed on the finishing line; they wanted to learn how to teach and they wanted others to know that they had been learning.

In an informal interview with Siobhan, Shona, and Kinya they said that they would rather come to university and be busy than have to stop and start throughout the day. They said that having gaps in the middle of the day meant that they constantly had to turn their motivation off and on. They said that the longer the break the less motivated they were to attend the next tutorial and then when they got to the tutorial they then didn't really want to be there. Siobhan said how she just likes to feel as though she has learnt something during the day, rather than going home tired from not doing anything. She said that when she gets home tired she doesn't want to do any study so there is a constant cycle of 'stop and start' which she felt had affected her total performance. The students said that although they felt that they had less of a workload in Session Two than when they were doing the KBC mode they felt
as though they weren't learning anything. They cited this factor as the principal reason that turning up to lectures and tutorials was difficult.

These comments confirmed Kristen and Skye's thoughts about the KBC mode of learning. They both said on separate occasions that they liked the mainstream for the social aspects; both said that it was good to catch up with old friends from school. But for learning and application to the classroom they knew in the first few weeks of the mainstream mode that the KBC method had been more effective for them. They said that it was a matter of bidding their time, enjoying the social life of university and keeping an eye on their grades. Kristen and Skye said that in fact the workload was easier because it was so directed.

Motivation quickly became an issue in the favour of the KBC Project as far as the students were concerned. It was interesting to listen to them say they would rather be busy and occupied when they were at university and feel as though they were learning rather than sitting around doing nothing. Kristen maintained that boredom was contagious and that she knew she didn't have it in Session One so she was convinced that she had caught it from the students around her.

In an effort to confirm or refute what the students were saying about how the lectures and tutorials failed to promote motivation a series of observations were undertaken of several mainstream lectures and tutorials. The following extracts are taken from the field notes taken from these lecture observations:
In the Science & Technology lecture there were concerted efforts to involve the students. What was noticed from the students that were surrounding me was the fact that they were happy to simply copy the notes from the screen then go back to sleep! It would appear that they did not mind the fact that they were not being overly stimulated. As far as mass lectures go the job was completed efficiently. The students were given the basic information and although it was not stated it was then up to the students to read further. As it is impossible to cover the entire knowledge base for the content that was being discussed in two lectures (Learning theories).

The Information Technology lecture was well prepared, and the content relevant to the upcoming assignment but the lecturer's attempt to link the content to the school setting was ineffectual. What was interesting to note was that after the first student left 25 minutes into the lecture within the space of the next 25 minutes 22 students followed - Kristen was right; it is contagious!

The maths lecture did little to stimulate the students - the lecturer was mumbling and yet what he was saying was important for preservice teachers to know! However the content that he was talking about failed to come across in any form that the students could record. I noted that he made no reference to the pupils in the schools, nor did he relate to the syllabus or give information on how to work with children that may be having difficulties with the content. (Field notes: 30/8/99)

From the lecture observations and further discussions with the KBC students it became obvious that the main thing that the KBC students disliked about the lecture format was that they were not involved. This lack of involvement had a direct correlation to their low motivation. Added to this was the emphasis
Chapter Six: Session Two 1999

placed in lectures on the end-of-session examinations. The students therefore had no ownership of or input into the direction that the learning would take and often felt that the classroom context had been taken out of the equation. In an interview with Fran she related how she was dealing with mainstream lectures and impending examinations. She also articulated how the learning environment of the lecture was not assisting her learning.

The children and the classrooms have been taken out of the picture; always the looming exams dominate the lecture content. If I pay attention I hope that it will pay off for the exams. It is possible that I will not do as well as last session because I do not perform well in the exam situation. I also find myself listening intently for any information that I will need to be a good teacher. However I have found that this information is not so easy to gain this session. I think that the learning environment is not as good as last session. You know the relaxed non-threatening, comfortable environment that is great for deep learning. The teaching from this session has been the ‘sit down shut up, let me pour some information in your head’ type of teaching. I have found that I have relied on my friends but then I think that I did that last session as well, I think that it just feels different. I am not sure that I am not just striving to learn what I will need for the exams as opposed to learning all I can to be a good teacher. I believe there is a difference. (Fran: interview 2/9/99)

Fran was the compliant student. She was reading and doing all that she could yet she still said she found it hard to be motivated. The responsibility, although the students’, was still not enough to drive their motivation. The comment, that although she was relying on her friends (the same people she worked with in KBC) it felt different, is interesting. When asked to expand on this Fran said
that she had been placed into different tutorial groups from her KBC associates and often she felt that this meant they were doing different assignments and she should be doing her own work.

To further investigate the students’ claims that the mainstream mode was not motivating them to learn, several tutorial sessions were observed. The Science and Technology tutorials were usually a mixture of hands-on experiments or design-and-make tasks that were aimed at the primary school level. In week ten of Session Two the tutorials that were observed were based on content knowledge about the curriculum and in particular the syllabus. The students needed to be able to apply lesson planning with the syllabus outcomes. The students observed were generally weak in this area and confirmed Fran’s early observation that they were reluctant to participate in any form of discussion about the syllabus or how to relate it to their lesson planning or the suggested outcomes. One student complained about the fact that they were not making anything and that looking at the syllabus was “boring”.

One tutor from the Faculty of Education also stated that in his opinion students appeared reluctant to engage in taking responsibility for their learning. He said that when he offered his 4th year students the chance to participate in a form of PBL activities they responded by refusing. They said that they just wanted the information and that it was his job to provide it.

The attitude of indifference and apathy that a lot of mainstream students were displaying was a new phenomenon for the KBC students. Apathy was never
present in the KBC students' homeroom and it soon became obvious from lecture and tutorial observations that Kristen's comments about it being contagious were right. Because the students now had a first-hand basis for comparison they could see the difference between the intensive learning environment of the KBC and that of the lecture mode. They had identified what it was that they needed for motivation and simply going through the motions of lectures and tutorials was not enough. Kerrie confirmed this when she stated:

I have lost sight of the big picture. This session I have just felt like a bludgy university student, last session I felt like I could become a good teacher but now I don't think I am going to achieve this I just feel like I am going through the motions. I just hope I can get the motivation back to do what we did last session. When I look at the assignments that we did in language in session one I don't think that I could ever do anything like that at the moment.

(Kerrie: interview 13/10/99)

The scenarios from the students suggest that the missing factors in their search for motivation was ownership of the content and the need to link theory with practice. It soon became apparent that they had learnt that in order to achieve the results that they wanted it was a matter of playing the game.

Playing the Game

The session progressed and the KBC students, like their mainstream counterparts, went through the fourteen week session by attending the
prescribed lectures and tutorials. However, some students attended only the minimum number of tutorials required to pass the subject.

I have missed the maximum number of tutorials allowed and now I am only going because I have to! I don't go to the lectures. I would if I was learning. But because I have done the KBC and I know there are other ways of learning I think it is just pathetic sitting there not learning; it's a waste of time. I just hate being this way. I will go home and I have nothing to do, I think I should do something but I can't really be bothered.

(Kerrie: interview 13/10/99)

Kerrie was not that proud of this admission; in fact she was quite despondent about the situation. It would appear that Kerrie did not adapt to playing the mainstream game. She was concerned about her motivation at the four week mark of the session and in the ensuing eight weeks she maintained that at times she had forgotten why she was even at university. Kerrie felt that at times she could have been doing a Bachelor of Arts degree because it was so hard to make the connections to the classroom and to teaching. Fran stated that she felt this way too and she realised that what she needed to make the subjects real and the classroom connection evident was the need to be in a primary classroom.

The children are missing and the classroom is rarely mentioned. I need to see the practice to make sense of the lecture so I am working at the school near where I live on Fridays. I really need to remind myself of why I am at university. (Fran: e-mail 1/8/99)
It was soon evident that this was a common activity for several of the KBC students and to overcome the lack of classroom connection they volunteered at schools that were within close proximity to where they lived. For several of the KBC students Fridays became their in-school day.

When I managed to get all my lectures and tutorials on Monday, Tuesday and Wednesday I volunteered to work at one of the schools around me on my university days off.

(Siobhan: informal interview 10/8/99)

Although not officially in the schools as preservice teachers they said that the teachers where they were volunteering were only too happy to have them in their rooms. So in this “unofficial” way eight KBC students found a way that they could link practice and theory. On their volunteer days the students would help their classroom teachers run maths groups, science experiments, reading groups and at the same time they were observing a classroom culture in action.

**Lessons from Session Two 1999**

Session Two 1999 offered the KBC students the first opportunity to discover their preferred method of learning. Prior to the students finishing the KBC session many of them were not looking forward to the prospect of leaving their familiar environs. They were concerned about how they would be received by mainstream students and lecturers. As part of a large group they soon found that anonymity made for passive and detached learning.
In the mainstream the KBC students soon found that learning was a different experience. The most common finding from this period was that the students felt detached from the learning. Their involvement in the KBC Project had seen them involved in their learning with a sense of ownership. They now reported that the lecture made them feel that they did not have any control over the content or the direction of learning. The tutorial experiences in this session also disappointed the KBC students because they were used to interaction and debate and did not understand the reluctance of the majority of their new tutorial colleagues to discuss the topics under review.

The findings and comments by the students confirmed that the KBC Project had allowed students to develop and establish a level of trust that allowed for the kind of interactive discussion that was synonymous with the KBC. The students realised that the kind of interaction and debate that they had come to relish could not be achieved with students who only met for 50 minutes once a week; because trust and familiarity were missing.

As students in the mainstream the KBC students were often observed to work or sit in KBC groups in the lectures or tutorials. When asked about this again the topics of trust and familiarity were again raised. The students said that they worked with fellow KBC students because they knew each other’s work ethics and trusted each other to complete set tasks. Although the students were adamant that marks and grades were not the underlying factor it cannot go unmentioned. In each discussion that was held with KBC students during the mainstream session of 1999 the topic of marks and grades would always arise.
It would appear that, although the students were collaborating in their KBC based work groups, they were very keen to compete for the highest grades. The reason the students gave for the need to obtain high grades was that they felt this would impress their future employers.

The KBC students reported that they found it very hard to stay motivated throughout Session Two. They often complained that they could not link the theory of the lecture to the classroom. Session Two did not provide for any classroom experience and the students felt that they needed this to help make the links with the lecture content. To compensate, many of the KBC students returned either to their KBC school or a school close to where they lived so that they could work voluntarily in classrooms.

Another interesting insight that the students gave as to the difficulty in sustaining motivation related to the university timetable. As KBC students the time spent at university was structured. The structure was deliberate and it was meant to reflect that of a typical school day, three work sessions with morning tea and lunch breaks. The KBC students reported that their days at university were now punctuated by long breaks that were often spent in an unproductive manner. The most common pastime observed and reported by the students was lying in the sun.

This was an interesting observation and the students said that the less they did the less they wanted to do. Long breaks between classes often meant that classes scheduled for later in the day were not attended. Although absenteeism
in the KBC session crept in students did not consciously calculate how many classes they could or could not miss. In session two the KBC students had quickly worked out the number of classes they could miss without penalty. The remainder of the session was then attended grudgingly.

The KBC students admitted that they liked the relaxed and easier work patterns of the mainstream session but knew that for learning they preferred the KBC mode. As the session progressed the students were able to compare the two modes of learning and in general the majority (twenty-one) agreed that they needed to be involved in the direction of the learning and active in the construction of assignment tasks.

This ownership equates to empowerment and when it was removed the students felt disempowered. This disempowerment was a contributing factor to the students’ lack of motivation. As preservice teachers it is crucial that their motivation be encouraged and promoted. The teaching profession needs beginning teachers who want to teach and more importantly are ready to teach. Their education therefore needs to inspire them and encourage them to be active collegial problem solvers who are willing and capable of undertaking life-long learning. The time spent at university should not be seen by preservice teachers as simply a hoop that must be jumped through. A specialised teaching degree must have obvious and constant connections to the classroom. Yet within the space of four weeks KBC students were reporting that they had lost sight of the “big picture” and had difficulty remembering
that the reason they were at university was that they were training to become a teacher.

The KBC students "survived" their mainstream experience and all passed their respective elective and compulsory subjects. For some the experience was less painful than for others. For students like Kerrie the holiday recess could not come quickly enough. She was intent on returning to KBC in first session 2000. Several of the KBC students enjoyed the mainstream experience simply for the opportunity to meet new people, catch up with old friends or enjoy what they determined was a lighter workload. For one student the mainstream mode was her preferred style she said she liked the structure offered by the set assignments and she decided to stay.

From the above statements it would appear that the KBC students still relied on each other and their friendship grew stronger. The lecture mode had diminished their motivation to learn and this is a valuable lesson to be learnt. There is compounding evidence that we need to be instilling in graduating teachers the skills associated with problem-solving and life-long learning. The reluctance of preservice teachers to take responsibility for their own learning only serves to strengthen the position and the need for a KBC style of delivery. If graduating teachers do not want to pursue or participate in action learning then what kind of role models are they going to be for the children in their classrooms?
The following chapter reports on the findings of Session One 2000, when the pioneer KBC students return to university to participate in their second year KBC experience.
Chapter Seven: Session One 2000

The Second Year KBC Project

The previous chapter recalled the experiences of the KBC students as they attended mainstream classes. The culmination of Session Two 1999 also coincided with the students completing the first year of their Bachelor of Teaching Degree.

This chapter discusses what happened to the KBC students when they returned as second year students and to their second KBC session.

Figure 7.1: Chapter Map
Can't wait to get back to KBC!

Hi everyone! I'm so happy we are starting next week. It feels like I have been on holidays for two years. It will be great to catch up with everyone and do some prac teaching. I can't wait!

(Julieann: DISCUS 23/2/00)

Throughout the summer recess it was not uncommon to see KBC students at the local shopping mall or to receive e-mails and phone calls from the students. The common denominator in these conversations was always the same question, “When do we start KBC?” and “What will we be doing in KBC?” It was interesting to note that the same terminology was always used. The students never asked, “When do we start university?” it was always, “When do we start KBC?” This signalled that the students were positive about their return and that any negative feelings that they may have had at the end of Session One had been forgotten or replaced by their mainstream experiences. One student said that she couldn't wait to get back to KBC, so she could start learning how to be a teacher again.

The Structural Details and Design for the Second Year KBC Project 2000

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Table 7.1: The Bachelor of Teaching Degree Structure for KBC Students – Session 1 2000
Planning and preparation for the second year KBC Project commenced soon after the cessation of the 1999 KBC Project. As second year students the KBC students needed to enrol in four new subjects. On the surface this does not indicate the problems that lay ahead. While extensive evaluation of the first 1999 KBC Project would result in a tighter first year program for the new KBC cohort in 2000 it was again uncharted territory for the pioneer group.

The KBC Facilitating Team - 2000

When the KBC Project started in March 1999 it did so with five senior lecturers. It was always obvious that this situation could not be sustained. The task of holding KBC facilitator meetings was nearly impossible. It was not surprising therefore that three of the original facilitating team withdrew their physical support in 2000. While they supported the concept of the project, they cited their mainstream workloads as the predominant reason for their inability to continue to lend their time to the project. The withdrawal of staff meant that there were only two of the original five facilitators for two KBC groups. This led to this researcher being recruited to take on some of the facilitating duties.

This late turn of events was not seen as an altogether negative aspect by the project coordinators Associate Professor Brian Cambourne and Dr Brian Ferry. Because there were now only the three facilitators it was believed that the project could actually run under the fiscal heading of "cost-neutral". This would not damage the long-term future of the project.
With an intimate knowledge of the KBC due to the amount of time spent in early planning and development meetings as well as the numerous hours spent as a researcher with both students and staff, this writer relished the opportunity to become the third member of the KBC staff. The change in job description and status was announced to the students prior to their return on the DISCUS chat space.

Dear KBCers
B1, Julie and I have been gathering lots of ideas for Year 2 KBC and are looking forward to the session. Everybody who returned their acceptance is of course in this year's KBC. Can you handle another year of B1 and B2? Of course you can! I am delighted to tell you that we now have a J1 (not a B3!) on the team - yes Julie will be part of the teaching team. (Brian (B2): DISCUS 9/1/00)

Hi Julie,
This is great news! But are you sure we can't call you B3?
(Fran: DISCUS 10/1/00)

The new smaller team meant that communication channels were easier to maintain, planning meetings were easier to schedule and once session got underway, every Thursday a meeting could be held with all three staff members. The advantages of this meant that all three facilitators knew what was happening in both KBC student groups. Stories, problems or issues that had arisen were discussed and any action that was deemed necessary was carried out promptly.
The 2000 KBC Model

In light of the research and experiences of 1999 the KBC model underwent a series of revisions that in hindsight proved too conservative. The students’ advice regarding the diagrammatic representation of the KBC was however heeded. This resulted in the three interlinked circles that represented the three sources of learning being separated (see Figure 7.2).

The conjoined circles were replaced by a series of interconnecting lines that attempted to show the equal importance on the three learning sources and to show their interdependence as well as their fluidity. A simple definition of each learning source is provided. The centre KBC ellipse illustrates that to be a part of the KBC process meant being involved in the activities of the three surrounding learning sources.

Figure 7.2: The KBC 2000 Model
The Second Year Subjects

The students entering KBC 2 needed to enrol in four compulsory subjects. These subjects were Curriculum and Pedagogy II (C&PII), Human Society in its Environment (HSIE), Creative and Practical Arts (CAPA) and Personal Development, Health and Physical Education (PD/H/PE). The coordinators of these subjects had little direct involvement in the KBC Project. It was necessary therefore to meet with each subject coordinator, explain that the KBC 2 students would be enrolled in their subject but would not be attending the mainstream lectures or tutorials. The immediate concerns from the subject coordinators (with one exception) were centred on the need for guarantees that the KBC facilitation process could deliver the same outcomes for each subject. The coordinator and teaching team for the second year PD/H/PE subject had been looking at PBL as a possible means for content delivery and were therefore supportive of the KBC concept. This support was realised when that team wrote a separate subject outline for the KBC students. The subject outline had assignments and assessment tasks that were completely different from those for the mainstream students.

However, this degree of support was not replicated in the remaining three subjects where it was mutually agreed that the KBC students would carry out the same assignments as the mainstream students. There was one variation to this where the KBC students would use Computer-Mediated-Communication (CMC) to complete their third assignment for Curriculum and Pedagogy II. Overall this left little room for PBL tasks and student ownership of content. This situation was far from the ideal that underpinned the KBC philosophy but it was decided by the
KBC facilitators to run with this format and try to make subtle changes as the session progressed. It was thought that to push too hard could result in alienation or even dissolution of KBC 2. As the KBC 2 subject outlines were being prepared this writer experienced more than a little doubt that the content and assessment details met the criteria of KBC. However, great journeys always begin with a little step and to make changes to the traditional content delivery of set subjects required subtlety.

A lot of hard work and negotiation went into the preparation for KBC 2. These efforts however, would not be recognised by the students who by week four of Session One 2000 felt that they had been let down. The pioneer students felt that they were once again under the microscope and that they would have to prove to Faculty that the KBC way of doing things was not only possible but could succeed.

**The Weekly Structure**

To meet the requirements of the four new subjects certain changes needed to be made to the existing KBC way of doing things. In KBC 1 when lectures began the KBC students were involved in intensive collaborative classes and they did not attend mainstream lectures. These classes included training that encompassed developing a rudimentary knowledge of the skills, processes, understandings, and methods necessary to participate in PBL along with an emphasis on small group work. However in KBC 2 the weekly timetable was prepared so that the students could attend mainstream lectures both in the weeks leading up to and during the
start of the in-school practice component or what is referred to in KBC as the SBL.

Below is the timetable that was prepared for the second year KBC students which shows a new mode of attendance and content delivery. One quick glance shows that this new model for content delivery was structured and directed. It was of deliberate design as it allowed for the inclusion of mainstream lectures and compulsory CAPA, and Physical Education (PE) skill workshops in the KBC week. As part of the negotiations with mainstream subject coordinators it was deemed necessary for the students to attend lectures. The mainstream subject coordinators thought that if the students were attending the lectures it could be guaranteed that the students were at least “receiving the correct subject content”.

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<td>KBC homeroom CL</td>
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<td>KBC Homeroom</td>
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<td>Lunch</td>
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Table 7.2 KBC 2 Session One 2000 Weekly Timetable
After four weeks on campus the students would begin their in-school practice teaching. As was the routine in the first year KBC program these days would be fixed. To comply with the lecture and workshop timetable, these days were scheduled for Wednesdays and Thursdays. The KLA workshops conducted on those days would be rescheduled on Tuesdays and Fridays. Although far from the ideal, the timetable was seen as a way of managing the KBC against the constraints that were once again being imposed upon it. However it would not take long for this structure to become unworkable, and its very existence would be the source of widespread dissension amongst the KBC students.

The Session Begins

With negotiations, preparations and subject outlines completed the students returned for an information session the day prior to the commencement of their KBC 2 program. It had been a three month summer hiatus and a fourteen week university session prior to that since the KBC students had all been together in one room. The information session was designed to orientate the students to their new timetable and welcome several students who were starting in the KBC. As the quota of 24 students had never been reached and the withdrawal of two students from the KBC (one withdrew from university studies for personal reasons, the other preferred the mainstream way of life) there were several vacancies. Invitations had therefore been offered to all students in second year mainstream to join the KBC. Six students applied and were interviewed by the KBC Co-coordinator who explained the KBC way. These six once informed decided that
they would like to join the original KBC students. The pioneer students welcomed the new members, as they believed that new people would bring new ideas, talents and perspectives to the KBC as a whole.

The first few days of any session commencement is a time of uncertainty as students wrestle with timetable clashes, new lecturers, new subjects and those ubiquitous subject outlines. The KBC students starting their second year studies were part of this turmoil where the previous year they had been enmeshed in intensive group work and PBL. Just as twelve months earlier it was Katherine who offered the first reflection about week one, via e-mail she said:

I think I speak for a few of us when I say WHEW! The first week is over... what a load! Well the rest of the session awaits us, and I think it might go as fast as the first year did! (Katherine: e-mail 6/3/00)

Katherine’s comments concerning the size of the workload would prove prophetic.

The term “intellectual unrest” has often been used by KBC facilitators to describe the state of mind students find themselves in when pushed from previously established comfort zones. However in week one of year two the students’ state of mind was more akin to intellectual distress. As the field notes below reflect:

The second year students have completed their first week of the new formatted KBC project but not with total acceptance. The students asked so many questions and demanded answers. The students wanted to know everything that was going to happen, how it would happen
and when it would happen. At first it appeared as though it was intellectual unrest but it was more like intellectual distress. New members to the group have generally been accepted. Although one girl’s comments that it “sounds like a bludge” did little to settle jagged student nerves. The program that is on offer to the students is a mix between mainstream and KBC. It will be interesting to watch how the students cope with this structure. (Field notes: 3/3/00)

The Mainstream Hangover: The need to put Unity back into Community

Throughout the first few days and the second week the students were observed to position themselves in small groups that, when examined closely, were the same as those viewed sitting together in mass lectures in the second session of 1999. These four friendship groups do not make a KBC. It could be argued that we had four small KBC groups but it must be reiterated that a KBC is a group of people dedicated to collecting and building upon knowledge for the whole group.

The situation that was evident in the early days of Session One 2000 was a result of the mainstream mode. Throughout mainstream the students had found themselves divided into tutorial groups that had been randomly assigned or allocated alphabetically. They were also divided across many different faculties according to the outside elective that they undertook. It was therefore inevitable that some students would return to the KBC Project having forged and maintained strong friendships and working partnerships. One particular group had sustained close links throughout the summer break and had decided that they wanted to form a school-based learning group. They even had decided upon the school
where they wished to work. These strong friendship groups were a definite mainstream hangover.

That the students had formed close and amiable working relationships was positive but if they remained closed then it would be to the detriment of the KBC as a whole. Tight knit friendship groups could operate efficiently but if it meant that they were doing so with disregard to the other students in the KBC there was no difference between a mainstream study group and the KBC.

There was an immediate necessity to hurriedly put the unity back into the community that had been a central focus of KBC 1. Several team-building sessions were quickly timetabled. These activities saw that the students were placed into mixed groups. The activities were fun and non-stressful and certainly did not carry any assessment weighting. It was important for all the students to get to know one another again.

The school groups were formed after the early round of team-building exercises but generally the four school groups that were created were dominated once again by geography and friendship. Several students once again overlooked personality clashes to work at the school closest to where they lived. Several students were unhappy that they had been forced out of their predetermined school group because students were citing transport difficulties. These issues certainly did not contribute to establishing a conducive KBC atmosphere. To compensate, the students were encouraged to work in different groups for their various assessment tasks. The result was that there were too many groups and students had trouble
coordinating meeting times for the various group members. It just seemed that all efforts to re-create unity in the community kept backfiring. Not only were the students under a great deal of stress in those early days and weeks of Session One 2000 but so too were the facilitators.

**Sitting on a Powder Keg**

By week three there was a certain degree of "intellectual unrest" and a degree of uneasiness among the students that was hard to label. It felt as though a powder keg could explode at any minute. The students were always questioning or complaining of something, a problem that was associated with one of their subjects, their school group, or the lack of a permanent homeroom.

The school group issue was not going to be resolved in a hurry; it would not go away. An e-mail received from one school-group member (who asked not to be identified) dealt with how she was concerned about a new member of her school team. This new member was placed into their existing school group citing transport difficulties and her inclusion came at the expense of an established member who had to join another group. This should not have created the problems that it did. However it was obvious that the 1999 KBC students had splintered into four sub-groups and with the new KBC structure the addition of a new student with different ideals created another pressure that this particular school-group felt was unfair.
I feel we have a potential problem. Since the end of last year our little group has hoped to work together in a school. We all have the same views on sharing the work, etc. Now that has changed. The fact that we have been told to take this new person (who has a strong and different personality) because she asserted herself to get to the school she wanted has caused many a concern in our previously established school group. I'm at university to learn lots of new tricks and I feel I will have to assume the role of peacemaker if she rocks the boat or challenges our group rules. I didn't want this responsibility but I am willing to give this new member a go but I can't help feel as though we were targeted by her when she says it is going to be a bludge this makes me feel very nervous. (Anon: e-mail 1/3/00)

That some students were still unhappy with the way school groups had been formed was an issue that lingered. It was perceived that some students got their own way at the expense of others. A harder issue to deal with was the emergence of dominant personalities that had not been such an issue in the previous year. It would appear that as second year students the KBC members were now more "savvy" and university wise. Students started to give voice to what they wanted. Fran threatened to return to the mainstream stating that she would not put herself through any group turmoil as she felt that it was her turn to get her way. In an informal interview she stated:

Last session I was placed into tutorial groups with people I did not know and at times that did not suit and I put up with it. This session I know what I want and I do not want to go through extra stress due to group issues. I will go back to mainstream if I feel I have to.

(Fran: informal interview 9/3/00)
We are not always in a position of being best friends with the people we have to work with but as professionals it is expected that the job be carried out regardless. It was now time that the KBC 2 students realised this and carried out their session tasks professionally.

The field notes from this week related to the lack of community feeling in the group and show how attempts to initiate knowledge building were fruitless:

My initial observation that the group are functioning not as an intact learning community but as 4 sub groups appears to be correct. If they are supposed to be sharing and supporting each other as a KBC then this aspect must be considered as an emerging issue. During the sessions that I conducted with the second year students this week I found it incredibly difficult to promote knowledge sharing at all. Whenever a question was raised or asked as soon as one person started talking so too would all the different sub-groups. There were many relevant conversations but none of which were benefiting the group as a whole. When I asked the groups to split up and change tables to share their findings the students refused, stating that they were happy sitting with their friends. It may have to be accepted that because the students spend so much time moving from lectures to different rooms and the nature and structure of the second year subjects that the group may never be a true KBC.

(Field notes: 10/3/00)

The assessment tasks from the outset caused high levels of anxiety and the students were not applying any of the principles of PBL. They were primarily concerned with who was going to be marking their assignments and therefore wanted to structure the assignment accordingly. The students were displaying many of the characteristics of mainstream students. They were not sharing
knowledge nor were they building on the collective knowledge. They were merely focusing on completing the assignment so that they could tick it off and move on to the next. (The majority of the students made up grids that showed when all the assignments were due so that they actually could “tick” them off.)

The twenty-two students were working in small groups that did not share across the whole group. They were intent on getting the right answer, doing the right presentation and obtaining the right mark. This was evident in their approaching the mainstream coordinator for HSIE on two separate occasions in week three and asking her to come and talk to them. What happened however, was that the coordinator came into the KBC classroom and spoke only to the students who had visited her office. This only served to pour fuel onto a smouldering fire.

*The Powder Keg Explodes!*

It was obvious that most of the students were not employing any problem-solving strategies to the assignment work because late in week three the HSIE coordinator was again asked over to the KBC room. Most students were unaware of her presence in the room as she sat again with the students who had asked her over. This is not seen as a fault on her part and her support of the students was appreciated, but the students who invited her overlooked the fact that they were a KBC. They failed to inform their colleagues that they had arranged for a mainstream coordinator to be in the room. When the majority of the group realised (some were doing Internet searches, or writing, others were involved in
group discussions) they were angry that she was all but finished and was leaving
the room. When one student monopolised her last few minutes in the group to
enquire about how he could get a High Distinction (HD) in her subject it was
enough to cause the powder keg to explode.

When the HSIE coordinator had left the room the following heated exchange took
place (the names of the students have been removed at their request):

Student 1: Well are you going to tell us what she said or not and what
is all this talk about how to get a HD. Not only do you ask
her over here and not tell us but also you waste her time by
trying to find out how to get a HD. I am so sick of hearing
about HD’s I thought we were a KBC.

Student 2: I have every right to find out how to get a HD

Student two then left the room and did not return until all the KBC students had
left for the day. Student two had every right indeed to determine how an HD could
be obtained, but in a functioning KBC this kind of information would be shared
among the group. And when the students who had initiated the visit realised what
they had done they willingly volunteered the information that they had received
from the HSIE coordinator.

The KBC students explained that because they believed the HSIE coordinator to
be their marker they had to “get it right” for her. To resolve this constant source of
conflict over grades the mainstream coordinators were approached and asked if
they would mind if we the KBC facilitators marked the KBC students’ work. As
they had no objections the students were informed that all the marking would be carried out “in-house”. This was an inroad into the traditional course structure. This measure was also designed to stop students from withholding information or competing for an extra mark. It was also stressed that the KBC facilitators would seek any extra information or clarification that was necessary from the mainstream staff and this information would be passed on to the whole group.

These actions served to reduce the dissatisfaction among the KBC 2 students but it must be added that it was only a “bandaid” effect. The intention by several students to concentrate solely on marks was not quelled despite measures taken by the facilitators. It became obvious that these few students were intent on using the KBC to their advantage and had little regard for its philosophical underpinnings. The reasons behind their course of action were never determined as those KBC students concerned would not confirm (or deny) their intentions. This situation served only to drive a wedge between the students concerned and the rest of the KBC students. It meant that a KBC by definition was never going to be possible in the KBC 2 2000 group. However, despite this disruptive undercurrent the KBC students did eventually make concerted efforts to work as teams and contribute to learning in the KBC. These efforts will be documented in the ensuing paragraphs.

No Longer Special

Along with the intellectual unrest and the struggle to meet the demands of a mixture of mainstream and KBC the pioneer students were also grappling with the
"new kids on the block". In 2000 there were now two KBC groups. A new intake of first year students had commenced. Because of the design of their program (the original model) the new group spent the bulk of their time in the KBC homeroom. This meant that the KBC 2 students felt displaced and replaced and one student commented that they no longer felt "special".

The pioneer group in 1999 indeed had privileges that are not normally available to undergraduate university students. The provision of a homeroom for the exclusive use of one group was the result of lengthy negotiations. It was however something that the pioneer students took for granted. As first year students they were unaware that securing a homeroom was groundbreaking but soon became used to a designated working space.

When the first session commenced in 2000 the KBC coordinator was unable to secure two KBC homerooms this meant that there was a need to implement a sharing arrangement of the KBC homeroom and utilising other rooms allocated by the Faculty of Education Student Services Department. The first year KBC students in 2000 accepted this as the way things were but not so the pioneer students. They did not like or willingly accept the arrangement. It was hoped that the second year students would take on a mentoring role and spend time in the KBC room with the first year students, however they stated that they did not feel that the room belonged to them.

On the surface the reasons that the KBC 2 students gave could be seen as petty or be equated to jealousy but to the students the reasons were valid and real. The
second year students felt that because the KBC 1 students had their work hung on the walls and their coffee cups and personal effects in place the room was no longer theirs. They said that they did not feel comfortable and that they wanted their own space as they had had in 1999. In their defence, KBC 2 students did have a lot of group projects to organise and they needed a place to meet and store their belongings. Siobhan expressed the KBC students’ perceived need for a homeroom in e-mail correspondence:

We need some kind of central space. For me, disorganisation is the problem. We need some kind of board to put up problems on, spaces to put resources to share, and things like that.

(Siobhan: e-mail 20/03/00)

The homeroom is more than just a physical space; it is in fact a central component in the application of the KBC philosophy. Such was the emphasis placed on the need for the KBC to have two homerooms in 2001 the KBC coordinator wrote to the Dean of Education.

I need to alert you to an issue which may well determine the future of the KBC Project, it relates to the need for “home rooms” big enough to service the needs of each cohort as they work their way through first, second, and third year. One of the very clear findings that is emerging this session is the necessity for each group to have a "home room". Without such a base the social and group cohesion which is necessary for the social construction of knowledge and skills begins to break down and the groups begin to display the tendency to splinter into quasi-competitive sub-groups.

(Cambourne, B. L., Personal Communication, 28/3/00)
That the KBC 2 students did not have their own room added to the destabilisation that was starting to occur in the early weeks of the session. The ideal arrangement would definitely have been to have two KBC homerooms. This may also have helped to alleviate a lot of the angst that was generated in those weeks. It was indeed hard to find any advantages in the KBC second year model at this point in the session.

It is clear from the above that all was not well with the second year KBC students. As these students wrestled with the new model and its variants the first year students were benefiting from the pioneering work of the 1999 students. This also added to the second year students’ displeasure. As the second year KBC students delved deeper into their assignment work they soon realised that there was no hope of them carrying out any PBL. The students who were new to KBC 2 in 2000 felt that the only difference was the fact that they found themselves in what they called a set tutorial group. The impact of attending the lectures was negating all the efforts of establishing and maintaining any sort of KBC.

We listened!

On Thursday 23rd March 2000 a meeting was held between the students and the facilitators in an effort to address the issues that were building in the minds of the students. This served to highlight one of the major advantages that the KBC had over the mainstream mode, that is the concern and involvement of the KBC facilitators for the welfare of the students.
The students were asked to consider the positives that KBC 2 could provide. Surprisingly enough some of the issues that they had complained about in the first few weeks they now listed as advantages. The following is the list that the students provided:

- the PE lectures had been relevant and relate to the real world (students define real world as the classroom);
- support of school groups although some may have different opinions help with piggy backing of ideas;
- the Creative Arts workshops had been helpful;
- the Wednesday and Thursday group times if used efficiently were helpful;
- resource sharing;
- discussions between groups and pairs;
- the KBC staff and Pauline from the Curriculum Resources Centre;
- school groups support learning;
- group presentations;
- KBC structure gave choices as to how to use lectures, tutorials or Self Directed Learning;
- the setting and administrating of tests is helpful for future teaching;
- some HSIE lectures;
- some of the mix of mainstream and KBC; and
- knowing what the mainstream students were doing and because of the similarity between tasks made collaboration with mainstream students easier.

The students then listed the negative aspects of the KBC and ranked them according to the following criteria:

1 = Annoyance - but can probably live with it.
2 = Irritation - but will probably resolve as we proceed.
3 = Hot issue - won't go away.
• using tutorial time to discuss assignments = 2;
• people not being open minded in group discussion = 2;
• secret meetings with lecturers from mainstream = 3;
• no stretching of boundaries for learning = 3;
• assignment requirement changing mid-stream - this causes unnecessary work and stress = 3;
• lack of wider sharing = 2;
• perceived bias of lecturing staff that the KBC students won't do well = 1;
• no personal time for socialising because of too many lunch time group meetings = 2;
• unsure of expectations = 3;
• mainstream and KBC assignments too similar: are we really different? = 3;
• lack of own home room = 3;
• structured assignments = 2;
• boring lectures = waste of time = 1;
• emphasis on marks = 3;
• personality clashes in groups = 3;
• workload = 3;
• too many groups = 3; and
• HSIE disorganised = 3

Each of the '3's' was addressed by the KBC Project coordinator who explained that some things take time to change, that we were working in a paradigm that had a certain embedded culture and that the KBC way of doing things challenged that culture. The coordinator spoke to the students about the issue of difference; he said that if the students started behaving like a KBC then the difference between their program and the mainstream would be obvious. In other words he was putting the onus of responsibility back onto the students: if they started to take responsibility for their own learning and undertook group sharing and
contribution, then the difference between their learning achievements and those of the mainstream students would be obvious.

At the end of the day students and facilitators alike felt that progress had been made. The students had aired their grievances and the facilitators had listened, and agreed to make the changes that students deemed were necessary. The students stated that they now understood the climate in which KBC 2 was operating and agreed that they would do their part to make things work. Siobhan offered the following advice to her colleagues:

Maybe everyone is taking everything a bit too seriously, and we should all just calm down. (I have taken my own advice on board). I think we should remember that learning how to teach is the key - not learning how to please certain lecturers when we are doing an assignment. Maybe everyone should sit back and have a think about why they are at university and why they want to be a teacher.

(Siobhan: informal interview 20/03/00)

Later that same night Ryan explained via e-mail what he considered the differences between KBC and mainstream were:

This year has been totally different to what I had expected for KBC 2. I suppose I thought that it would once again be very community orientated with a lot of time spent together to share and encourage ideas, but this year is just going so quick I am losing track. All of the original KBCers know what a knowledge building community is, and we all seem to know each other well, but I wonder what the new KBC
2 people think that this system is all about, because so far this year, we don't seem to be too distant from mainstream.

I don't mean that we should be different to mainstream, I like knowing what is happening to them and how their course is structured, and I don't think that I could successfully undertake this course without the support of my knowledge building community. For now it is much easier for me to see the combination that has been achieved with the three interlinking circles model, that I can understand and see making sense in front of me.

The ability to be able to learn from each other is a powerful tool, for example our C&P debate yesterday got me so passionately involved in the topic, and I know that would never have happened in a tutorial group with a bunch of people that I didn't know. From that experience, I can confidently say that I have knowledge about the topic, and it is making connections inside my brain, more so than sitting in the lecture. (Ryan: e-mail 20/03/00)

"Learning from each other is a powerful tool" - this sums up exactly what the KBC Project seeks to achieve. In a spirit of cooperation and collaboration the students would learn more from each other than they would by sitting in a mass lecture. The notion of them attending the lectures was to appease the subject coordinators but at the same time it was thought that they would be able to take the ideas from the lectures and add to their content through open and candid discussion. This assumption was based on what the KBC students had demonstrated as first year students; it was thought that they were indeed capable of carrying out this task. However it was not to be. The combination of lectures and KBC equated to a dysfunctional KBC. The students were not able to see past the fact that they were attending lectures which, as far as the students were concerned, was not "doing KBC". The students were unable to use the lectures to
their own advantage and this combined with the knowledge that there was little difference between KBC and mainstream assignments, only angered the students. They did not grasp the idea that they could vary the assignments until it was spelt out. The program set for the KBC 2 students was definitely different from 1999, but it was always going to be largely shaped by the nature of the subjects that the students were enrolled in.

**Putting the KBC back into KBC = Empowerment**

After the session held on Thursday 20\textsuperscript{th} March 2000, the facilitating team were confident that KBC 2 was back on track. It came as an enormous shock however, that within the space of five days the students were once again finding fault with their program and demanding that changes be made to their schedule. Prior to the commencement of Tuesday’s student presentation for Curriculum and Pedagogy II the students were reminded that due to the Mentoring Inservice Day the following Thursday the second year timetable was going to be interrupted. The students were asked for their input for Thursday’s timetable, as the facilitators did not want to waste their day or give them what they may have perceived as a “messy timetable” for Thursday’s activities. This elicited the comment that “what was the difference for this Thursday as it was all sloppy” (Fran 25/3/01).

When asked to elaborate the students said that they wanted discussion and input that was relevant to the classroom. The students were asked to consider therefore the structure that they required for week six to week thirteen. This turned into a
heated and emotional session on some of the same issues plus more which had manifested since the previous Thursday's session.

An extract from the field notes from this day attempted to capture the scene:

What should have been a normal Tuesday afternoon student-led presentation for Curriculum and Pedagogy II turned into a heated and emotional session that had manifested since last Thursday's session. This session was extremely hard going. Despite what we'd talked about on Thursday of last week, there was plenty of "storming" going on, and not much "norming". It could be interpreted that for some students, the KBC notion was breaking down. The sense that they're not "any different from mainstream" this year was repeated. Some students described themselves as "just a special tutorial group within the mainstream". When pressed as to what they wanted, the oft-repeated response was "We want KBC like we did last year".

Cambourne and I discussed this perception for a while. We came to the conclusion that the compulsory attendances at lectures, the assignments they have to do, the competitive nature of the mainstream ethos, have put them in an almost impossible position. Despite the fact that the assignments they have to do are not exactly the same as the mainstream (Ferry had done a lot of negotiating) they perceive them to be the same, and therefore for them they are. In fact the assessment tasks and the teaching experiences are not in sync, the assignments cannot be solved or answered by using the school experience. This is due to the fact that they were created for mainstream students and they are theoretical in nature. Therefore the students are right when they say they have a double workload. They have their university assignments and they have their school-based work to prepare.

(Field notes: 28/3/00)
The students were insistent that they were “not any different from mainstream” this year. When pressed as to what they wanted those who were adopting this position repeated, “We want a KBC- like we had last year”. However there were many indications of non-KBC type behaviour occurring: students were just coming and going as they pleased; students were by-passing KBC facilitators and group members and making private arrangements as to how they would do their assignments. Furthermore, there non-attendance for KBC homeroom sessions increased, and it was apparent that they wanted to be full-time students on a part-time basis citing family commitments, birthdays etc. as taking precedence over attendance at KBC sessions.

The overriding need to be seen as different to the mainstream students was ironic given that in 1999 as KBC 1 students they always wanted to know what the mainstream students were doing. This year when components of the mainstream format were built into their program the students had rejected it by week five. They said that the lectures were of no use for their learning, assessment tasks or classroom practice. Even the Curriculum and Pedagogy II lecture on classroom management that many commented on as beneficial was rejected in week five as just more of the same.

The students were adamant that with the SBL period just one week away they could not continue with the way things were and that changes had to be made. The students said that the lectures were not helping their learning or their assignment tasks and therefore wanted to restructure their timetable from week six. They said that they would not return to any more mainstream lectures.
A new timetable was negotiated and the students said that at least it "resembled" a KBC. The students described this action as "putting the KBC back into KBC!"

The dominant aspect of this activity was the fact that the students had the confidence and **empowerment** to carry out the task. It could be said that they were attempting to take **control of and responsibility** for their education. For students to be concerned with and directing their education was always central to the underlying philosophy of the KBC Project.

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Table 7.3 Student devised KBC Timetable

The facilitating team supported this course of action but it was again emphasised to the students that they were responsible for making it work and that the many indicators of non-KBC type behaviour had to cease. KBC students needed to remember that as members of a group they had other students relying on them for their learning, that learning in the KBC was a two-way street.

I do not want to be working in the school and worrying about the assignments that I have due, I would much rather be concentrating on immersing myself in the school environment.

(Fran: Personal Communication 28/03/00)
Given the scheduling of the assignment load Fran was not alone in voicing the above concern. To try to distribute the workloads more evenly, negotiations between the facilitators and students took place. As a result the due-by dates for the assignments were extended. As a response to the students' complaints that the assignments did not match the school context the students were encouraged to suggest ways that would make the assignments more relevant to their school context. It should be noted here that the students soon found that given the constraints of the assignments this was not as easy as they first thought. The important issue to note from this exercise is that it was a further example of how the community learning aspect of the KBC Project operated.

Later that night there were several affirmations of the proposed structure written on the KBC web space:

Today we spent listening to everyone's ideas about delivering lessons, with Brian's comments that I see as so valuable. Could we spend some time on Fridays after our 2 days at school, to get some ideas on some lessons we know we will be teaching the following week? Maybe others have seen resources we can use, or have something at home that would be useful. I would see this as a real KBC thing! I also think the new structure shows promise, I know how I feel about the workload, and all we can do is support each other so that we can enjoy our SBL experience. (Katherine: DISCUS 29/3/00)

Fran confirmed Katherine's feelings when she simply wrote:

Today we put the KBC back into KBC so now it is up to us! (Fran: DISCUS 29/3/00)
Ultimately, the reluctance of the KLA lecturers to “let go” and “trust the process” put the KBC 2 students into an impossible bind. The ethos of mainstream teaching and learning is competition among individuals for grades. The view of knowledge in mainstream is predominantly that there is a set of correct facts associated with each of the KLA's which must be acquired by the students who are being held accountable for acquiring this knowledge “correctly” by competing for grades. The ethos of KBC is collaboration and cooperative learning. This collaboration and cooperative knowledge building is established on a foundation of friendship and trust. This view of knowledge reasons that it is socially constructed, that it is not immutable, and that there is so much of it and it changes so quickly that it can never all be learned. While many of our colleagues will claim to be "constructivist" in their orientation to their KLA, they don’t seem to be able to practise it in their own subjects. If in 2001 our academic colleagues do not let go, and allow the KBC to maintain its integrity, the KBC Project will implode.

Back to Basics

Week six was the first week of the implementation of the new structure that had been put in place by the students. The start of week six was also the beginning of the SBL period, which also meant that there were no further homeroom clashes. The students arrived punctually on Tuesday in the KBC room and there was a genuine feeling of satisfaction among the students that they were doing what they considered was the KBC thing. They liked the fact that the room was theirs for the whole day. Several of the students had organised morning tea and in general the
students appeared much more settled than they had been in the first five weeks of session. It was evident that the culture of 'KBCing' was certainly tied up with the provision of a designated space. The KBC culture is centred on this space and this room is a base that provides stability, an identity and a sense of belonging for the KBC students.

The students reported back from their first days of the second year in-school experiences and were eager to share and offer advice on issues ranging from classroom management to lesson ideas. When the first week of the new program concluded Shona and Fran both said that the week was the best week they had had in 2000 because it was back to being KBC. The SBL period continued with the two days on campus on either side. It was a simple structure. The on-campus days were utilised with KLA workshops, group tasks and lesson preparation. In an informal interview Karen said:

We have re-established a rapport with our peers that means we can't wait to get back onto campus on a Friday or a Tuesday to talk about what we have seen or done in school. Things like what went right what went wrong. I have been watching the mainstream students and I wonder if they talk about what they have done in the schools the way we do. If one of us has a problem I know that someone else in the class will also be having that problem. I have the courage to voice my concern because I know everyone in the room. There is a great level of support now and I need that. I like the hands-on aspect of the program.

(Karen: informal interview 19/5/00)

Via e-mail Siobhan succinctly reiterated Karen's viewpoint when she said:
Everyone now seems pretty happy. I am so glad we're in such a strong group, because we have so much fun together and we really do know how to help each other out. (Siobhan: e-mail 21/5/00)

The numerous assessment tasks involved a great deal of group work. To allow the KBC students to work with members other than their school group meant that there were different membership combinations of groups. However, this in turn created the problem of too many groups. With different groups to work in it meant that many meeting times were required and this had the added difficulty of getting the various group members together. In reality however it was the design of the assessment tasks that were inherited from the mainstream that caused this latest problem. As Karen and Siobhan indicated above, the students had re-created rapport in the latter half of the session and they rallied and supported each other through their group assignments. Their achievements were noted and the results of this alternative model impressed one mainstream coordinator so much that she gave carte blanche for the second year group in KBC 2001, who would be enrolled in her subject. Once again the angst and determination of the pioneer KBC students as a whole had paid dividends for the students that would follow.

As the students worked hard on their assignments there were encouraging reports filtering back to the KBC facilitators from the schools both from the students and school-based teaching staff. The students were asking in-depth questions based on what they were observing as well as taking on their teaching duties with a high degree of dedication and thorough preparation. Kristen reported that it was good being back at school she said:
Being involved and working with the mentor teachers is a great way to learn. (Kristen: personal communication: 3/5/00)

Sharee stated that:

Being back in schools and in the classroom gave me what I really needed - confidence in front of a class. My mentor teacher gave me constructive criticism as well as heaps of advice. Classroom time enlightened me to the finer aspects of teaching I learnt so much! (Sharee: e-mail: 13/5/00)

Kerrie simply stated

I love being a teacher associate it is a valuable hands-on experience. (Kerrie: informal interview 1/6/00)

The following quote from one KBC in-school coordinator demonstrates how the teachers at his school viewed the KBC students during the SBL phase:

We are impressed by the quality of presentations and the work that the Associate Teachers do whilst in our school and we like sharing in their overall learning process. (Mark: interview 3/5/00)

On May 12th 2000 the in-school coordinators met with the KBC coordinator at the UOW to discuss the KBC Project's progress. The following extract is from a letter written by the KBC coordinator to the Dean of Education summarising the views of the eight in-school coordinators:
The praise for the project and the students (both first and second year) was much higher than I would have ever anticipated in my wildest dreams. Amid all this enthusiasm was a plea from all who were present for the in-school KBC experience (especially with respect to the second year experience), to be less "driven by the assessment tasks of the mainstream group", and more driven by "the specific needs and contexts of the KBC students, the KLA's they are learning about, and the schools". Of course I agree with them...

(Cambourne, B. L.: Personal Communication: 15/5/00)

Again, inroads into the traditional mainstream mode had been made, and the students in subsequent KBC Projects will benefit accordingly. The KBC Project now had school staff wanting to be involved in the planning and preparation of assessment tasks. The plan for 2001 is that these assessment tasks will be context-specific i.e. created at the school site. The construction of assessment tasks at the school site will meet the needs of both the schools and the KBC students as well as strengthen the working relationship between the university and the schools.

Looking for Fish!

Although the students grumbled and resented the content and structure of the set assignments the finished products were always of the highest quality. The KBC 2 students seemed determined to prove that they could achieve in both the academic and school arenas. Creative and Practical Arts (CAPA) was one subject where the students excelled and were able to show their creative talents. One CAPA assignment asked the students to work with the pupils in their class and prepare, implement and evaluate a three week program based on music or art. This
program would culminate in either a 'mini' performance (informal classroom-based) or exhibition. The students needed to consider what their program objectives/outcomes, teaching/learning strategies, resources etc. would be, keeping in mind that they should facilitate children being engaged in a range of experiences in either music or visual arts.

An example of work that went above expectations for the assignment was achieved when one group used an integrated approach with themselves and their Year 2 class and produced a children's picture book: "Looking for Fish". The book was written as a joint construction between the student teachers and the pupils and then a series of art lessons assisted the pupils to illustrate the book. To cap off this assignment the students arranged to have the book printed. Like any good book it had an official launch which was held at the university in the faculty's Art Studio and the children concerned, the local media and of course other KBC students were present to support the launch. To coincide with the "Looking for Fish" book launch the children enjoyed a barbecue lunch and games. This day was a testament to the work of KBC students. Not only did the in-school group work together but also the majority of their KBC peers rallied in support on the day by helping with the children, the cooking, the decorations and the clean up.
Knowledge Building in Cyberspace

It cannot be denied that the second year KBC Project began in a manner that was neither planned nor foreseen by the project’s facilitators. Relationships in the homeroom were often strained and evidence of a functional knowledge building community was at times limited. In “cyberspace” however, the students were in fact quietly implementing the principles and practices of a knowledge building community. To create this “other” KBC forum the students were using Computer-Mediated-Communication (CMC). The students could access the forum from their home computer, a group of five computers available in the KBC homeroom or from any of the computers within the university computing laboratories.

The collaborative technologies that were used were designed to provide students with communication tools that they could use to engage in informal processes of knowledge sharing and construction. This activity was a component of Curriculum and Pedagogy II (C&PII) but it was the one assessment task of this subject that had been devised especially for the KBC students to complete. The students were given certain topics relating to the teaching profession to discuss. The forum as it was called was designed with the purpose that the students could share insights about how schools work and teachers’ role/s. The topics or fields were organised to reflect the themes from C&PII.

There were very few rules attached to the forum. The most important of these however concerned the identity of the school, staff and pupils, which at no time were to be made public. Each student was required to make a minimum of three
contributions to each major topic area of the forum during the session and the contributions needed to refer (from time to time) to relevant authors in the field. Having students refer to significant authors or texts was a deliberate attempt by the facilitators to ensure that students were reading. The students’ contributions exceeded the predetermined minimum. The following four topic areas were the fields that the students added to throughout the session:

- Assessment of student learning.
- Classroom and Behaviour Management.
- Curriculum planning.
- Schools and Teacher Roles.

*I loved the forum*
(Karen 9/6/00)

The forum was one of the surprise success stories of KBC 2. The questions that were raised and the “conversations” that were generated were evidence not only of learning taking place in the school context but that students were thinking about the deeper issues that are synonymous with teaching and schools today. Through their immersion in the school culture, the students were able to witness and appreciate the complexity and multiplicity of a teacher’s role. Students were also increasing their awareness that teaching requires skills and practice. Importantly, however, students were gaining an insight and understanding that children all have different needs. It was reinforced that being a teacher involves commitment, professionalism and requires life-long learning.
Each of the four major topic fields all had numerous subtopics created. The total of entries in all subject areas in the space of thirteen weeks numbered just under one thousand. It is of course not possible to provide samples of all the conversations that took place in this forum. The following however is a sample from forum topic one: “Assessment of student learning”. It shows an interaction that took pace over four weeks among several students and one facilitator who also joined the conversation. The sample shows how one student initiated a conversation based on a text that she had been reading. She titled the entry: “Listening to students; not just hearing”.

In my reading of Groundwater-Smith (Chapter 7), it speaks of listening as being an important skill for a teacher to effectively understand the student's interpretations and understandings. The authors say that listening involves much more than just hearing. It involves giving meaning to the sounds we hear (I think this is a great comment...isn't this the same as reading, giving meaning to the text we are reading?). It also says that effective listening is NOT automatic. It is a skill, which requires effort and practice. Many of us have formed bad listening habits, such as tuning out for some of the conversation, letting our minds wander, being easily distracted, and many more...I know I have done all of these. It will be a deliberate, concentrated action to be alert (even when stressed, tired or whatever else), to listen and ask questions to my students, and then listen again...This I think will be an important part of assessing each student's learning.

(Linda: forum entry 26/3/00)

Siobhan then added to Linda’s posting:

Linda, sometimes when I am tutoring my students, I find that I have asked them a question and then just switched off, nodding my head
and going "mmm" in the appropriate places. I agree wholeheartedly that listening, especially when it's an explanation of how to do a maths problem, or the plot of a novel, etc that you've heard so many times, has to be a concentrated, focussed activity. This is especially true when you want to look behind students' words and into what is going on in their minds. There is so much to be gained just from listening to children. They have so many opinions and experiences that are valuable. 

(Siobhan: forum entry 26/3/00)

The notion of knowledge building then continued when Fran added her comments to the growing discussion:

I would like to add a comment. I agree that the children in our class are important individuals and if we respect them we will value them. If we truly value them we will listen to them. If we do this we will be showing it, remember children are very astute and they can sense when someone is insincere. Respect is a two way street.

(Fran: forum entry 30/3/00)

This conversation lasted for several weeks as students read or witnessed more concerning the topic that Linda started on March 26th 2000.

Listening is such a good point to consider, I am finding that listening is one of the greatest assets of any learner and teacher, as I found at the mentoring day, just sitting back and listening to all those years of teaching experience flow over me, was one of the best learning experiences I have had. 

(Ryan: forum entry 31/3/00)

I've read the information stimulated by Linda. What a wonderful world it would be in the classroom if we could listen to the every little person's important message. Unfortunately time is a problem so you have to cut them short and pretend to listen. So you don't even hear them.

(Shona: forum entry 29/3/00)
Shona has brought up an interesting point that as teachers our time to teach our students all they need to know in every KLA, as well as mould them into ‘respectable human beings’, IS very limited! It may, therefore, be difficult to find the class time to allow all 30 or so students to retell in detail what they did on the weekend. We should, however, not be too quick to cut a student off (mid-sentence) in fear of running out of working time. We should probably be encouraging students to feel comfortable enough to express their thoughts, feelings and sometimes share their experiences with the class and be attentive. This will help to build on the students’ self esteem.

(Kerrie: forum entry 1/4/00)

I agree with all that is said about listening. I can understand both sides of this conversation – as a teacher it is hard to listen to what each and every child has to say...but there is just not enough time in a day!

(Kristen: forum entry 2/4/00)

Kristen, It’s always a balancing act. Teachers who are too task oriented may appear to be lacking in humanity. Teachers who are too personal and friendly may appear to be too social. I have always worked on getting to know the children well as this helped me to understand them as people. For me this made the more formal part of teaching easier (not that I am very formal at the best of times).

(Brian Ferry: forum entry 5/4/00)

What Linda and Siobhan have said about the importance of listening to what the students have to say is an excellent point. You can assume you understand what the students are saying but it is not until you really listen to what they say that you can read in between the lines of their thoughts. Remember the key is to listen to them the way you want to be listened to.

(Skye: forum entry 6/4/00)

Hi, I really liked Skye’s final thought- listen to them the way you want to be listened to. I see some teachers brush aside the thoughts of
their students (especially if they are complaints!) and although there is a limit to how much we can base our teaching upon what the students like or dislike- we must continue to listen and respond to their thoughts. I like to spend a little time at the conclusion of every lesson I teach asking students what they liked or disliked about the lesson just completed. I find it helps them to reflect on their learning and for me to reflect on my teaching. (Sarah: forum entry 9/4/00)

The above conversation is filled with examples that highlight how the students were using one another's ideas to generate thought processes that delved into areas that the students admit they had not thought about before. The extract shows how students were relating their thoughts back to possible classroom use. It also shows how students were drawing on their own life experiences and suggesting ways of adapting their own behaviours. The conversation is also filled with honesty and self-evaluation about their teaching styles and personal habits. It also shows how KBC facilitators could be involved in the knowledge building process. The notion of co-learning had always been a KBC founding premise.

There were students who disliked having to use CMC and couldn't understand why people could not just talk about certain issues, as an interview with Shona indicates:

Shona: I like research and I like doing assignments I can happily sit and research or prepare classroom resources, but I hate this entering stuff onto the home page thing. I find it hard to physically read the entries and reply to them. I feel really threatened by this task more so than an exam. I'll do it but it is very difficult for me.
JK: Why do you think that writing web entries make you feel threatened?

Shona: It's not the fact that the whole KBC reads my information. I'm just not comfortable with this web technology, I suppose. I really feel irritated to have to spend such a long time reading through other people's entries. Why can't we just talk about these issues in class? I'll fulfil the task but not willingly. (Shona: interview 30/4/00)

However, in the early days of KBC 2 there was very little talking going on in the KBC homeroom for reasons that have already been stated. The CMC forum therefore filled a void and certainly provided an avenue where students could talk to each other. The sample of CMC provided above was begun not long after the students had "taken back" KBC and hence the atmosphere in class was still tentative.

Heather agreed with Shona's sentiments when she stated that she would prefer to hear what people were saying rather than reading their thoughts all the time.

The forum doesn't always allow you to ask questions or interpret the exact meaning that the person was trying to say from the written word. (Heather: informal interview 2/5/00)

In fact it is one of the major criticisms of electronic communication that far too often the true nature of the written word is misinterpreted. Although not carried out in KBC 2 2000 the next step for KBC facilitators would be to take an idea/s or conversation from the forum and expand on it in an open discussion in the KBC homeroom.
As the session progressed and the students kept on with the business of KBCing, the entries on the forum also continued. The fact that it was a compulsory element for assessment meant that towards the end of term the students who had resisted its use now had to make entries for their assessment. These forced contributions were obvious as they quite often failed to build onto ideas previously stated. As a form of assessment its sheer volume became a burden for this facilitator/researcher who had to assign a grade to each student for his/her contributions. This aspect however should not detract from its use in the future as its value as a KBC tool can be seen from the example above. It would be far better to make this tool a non-assessable component of the KBC.

So long and thanks for the fish...

After an acrimonious start to the session the second year students completed KBC 2 in June 2000 with friendships and working relationships intact. It was a session that was marked by extreme highs and lows. However by the end of the term, based on all reports from the school-based teachers, the students had won the teachers’ respect, adding to the respect of the mainstream subject coordinators and KBC facilitators. They had achieved this through their dedication to their work in the schools and the quality of academic assignments (although not problem-based) that they submitted.

It will never be known what would have happened had the students not "put the KBC back into KBC", but their doing it was a major turning point for the session.
When the students took the stand that they did it served not only as a means of *empowerment* but as a catalyst that put the responsibility for learning back with the students. The desire to create independent students who were willing to take on this form of *responsibility* was always a paramount intention in the formation of the KBC.

**Lessons from Session One 2000**

Based on the lessons learnt from session one 1999 and the analysis of them the proposed 2000 KBC model took on a different look. As previously discussed, Session One 1999 saw problem-based learning excluded from the diagrammatic model redesigned by the students. On closer examination however it was not as dysfunctional as their diagrammatic representation would suggest. The original 1999 model was based on the presupposition that students would naturally achieve the intersection of the three learning sources and this would result in the formation of a KBC. Instead the feedback from the students was heeded and a new model was constructed.

KBC model II, 2000 (Figure 7.2) had a series of interconnecting lines that attempted to place equal importance on the three learning sources and to show their fluidity and interdependence on each other as well. A simple definition based on the findings of 1999 for each learning source was provided. The centre KBC ellipse illustrated that to be a part of the KBC process meant being involved in the activities of the three surrounding learning sources. However, as the session got
underway it was soon obvious that the design of the model was not going to influence the students, their learning experiences or the events of the session.

Community Learning

What was learnt?

As the session progressed this learning source was placed under enormous pressure. The students returned from mainstream and a long summer break keen and obviously pleased to be back in the KBC. They stated that they were looking forward to starting their 'learning again'. Yet the KBC 2 experience that awaited them was not going to look like that of their first year. The lessons learned from 1999 were certainly being applied for the new 2000 KBC first year group but the pioneer group were now in second year and this meant a new range of subjects and with these came a range of outside influences, restraints and constraints.

The facilitation team changed; this researcher had switched roles from participant observer to facilitator, other original members had withdrawn their services due to the workload commitments of the mainstream program; there were new subjects to negotiate; new KBC 2 group members and most obviously there was now a new group of first year KBC students. The arrival of these students had surprising consequences. One of the most notable problems for this session stemmed from our underestimating the importance of the KBC homeroom for the stability and maintenance of the learning community. Each of these issues all placed a strain on the learning community and each needs to be examined.
A Change in Roles

The students were informed via the DISCUS space that a “new” facilitator had joined the team, and on the surface this did not present too many problems. It did however change the relationship that this researcher had established with the students. It took several weeks for the students to feel comfortable with this dual role. Several students stated that they were unsure that they could provide feedback concerning the program that would not expose them to any bias or penalty. Several students also stated that they missed the involvement of one of their first year facilitators.

The Second Year Subjects

With four new subjects there were four new subject coordinators to convince that the KBC process could meet the intended subject outcomes without the students attending mass lectures or tutorials. Without the approval of the subject coordinators it would prove difficult to establish a second year KBC Project. To help overcome this problem it was agreed that the students would attend the lectures that were offered in the mainstream and then as a KBC group discuss the topics raised. The facilitating team expected that the KBC students of 1999 would relish the opportunity to analyse and discuss the mainstream lecture topics on offer, because the research from 1999 had shown that the group were only too keen to discuss and debate. Although known by the KBC facilitating team that
this was not PBL, nor indeed in the true philosophy of KBC, it was a compromise to maintain and operate a KBC in 2000.

The assignments, except for some changes of wording were on the whole the same as those that would be attempted by mainstream students. The major problem here was that PBL was sacrificed. Although numerous attempts were made to rearrange the wording of the assignment tasks there was no disguising the fact that the tasks set for the KBC 2 students were straightforward, directed assignments. The students were quick to realise that PBL was now missing from their program. With outside coordinators the students were attempting to structure their assignment tasks to meet the requirements of the mainstream markers. The students were showing signs of competitiveness instead of collaboration and the skills associated with PBL were not being utilised. The students stated that they were just another tutorial group competing for marks. Problem-based learning was missing and although the problems from 1999 were difficult they were based on real life scenarios found in primary schools. These problems gave the students freedom and ownership but carrying out the same assignment tasks as the mainstream students did not offer a point of difference. The need to be seen as different became a common catchcry in the tumultuous early weeks of Session Two. It was obvious that students saw difference as a necessary component of KBC and having to attend mainstream lectures did not help reduce the tensions in the community.

The KBC students had returned to second year with an expectation that things would be the same and that they would be able to pick up where they had left off.
Instead there was an internal turmoil that the community had not faced before. There were several new members who had joined the KBC in 2000 and there were members who had returned from mainstream with very individualistic work patterns. Team building workshops were important and carried out quickly but the resentment that the group harboured for their new KBC structure was too powerful and these workshops quite often proved futile. The students were looking for what they had had before and when it did not eventuate there was a sense of loss and confusion. They were unaware of the behind-the-scenes negotiations that had taken place to enable KBC 2 to operate. They did not value the many negotiations between mainstream subject coordinators and KBC facilitators. Added to this mixture of emotions was jealousy.

**Sharing the KBC Homeroom**

In 1999 the KBC homeroom was solely for the use of the KBC students - a place to organise assignments, display work samples, access the Internet, carry out daily workshop tasks or meet group members out of the standard KBC hours. It became a central component of the KBC. The intention in 2000 was that the homeroom would continue to function in these ways and it did; however it now had to be shared. A timetable now had to be established where the KBC homeroom could accommodate both KBC groups.

The 2000 first year KBC group accepted this arrangement but the pioneer group did not. They felt displaced and this added further difficulties to the already
struggling community. The students said that they were disorganised, constantly changing rooms or lecture theatres and that they had no place to meet. The students were even observed working in the cafeteria. They went on to say that they no longer felt “special”.

The KBC homeroom is essential for the community; it is the central base and provides for stability and social cohesion. Without this social cohesion the likelihood of forming a successful KBC is remote. When the 2000 KBC students were searching for workspaces they were not able to work together as a community. Therefore the tendency to develop quasi-competitive sub-groups was very real. The need therefore for a dedicated KBC homeroom for participating groups is an issue that requires yet another break from tradition. Securing a dedicated space such as the KBC homeroom in a system that has only ever dealt with common teaching areas is analogous to trying to fit the square peg into the round hole. For the social construction of knowledge it is vital. Securing one homeroom was a coup; being allocated two rooms at the time of writing appears highly unlikely. Therefore inventive timetabling and structuring of KBC groups would appear to be the answer. If students are made aware of these timetables and schedules in the beginning there should be no reason for any subsequent KBC groups to go through the angst that the KBC 2 2000 group did.
The Turnaround

Hindsight strongly suggests that the KBC 2 Project should have simply structured its second year program according to its inherent design principles. However, the decision was made to run with a policy of appeasement and compromise. It was thought that if the students could prove to the mainstream coordinators that the KBC process could work then greater freedom could be obtained for the KBC 2 group of 2001. However, the problem with the assignments, attendance at mainstream lectures and the homeroom situation saw the KBC 2 program on a course of internal combustion. It was doubtful that it would even survive the session. From this incredibly low point the students managed to once again display the traits of their empowerment from 1999 and together they rallied to put the “KBC back into KBC”. It is without doubt that had things not changed there would have been no community and certainly no community learning to speak of. This turnaround had to be student-driven because there was a loss of faith in the facilitators; the changes needed to come from within the community.

The students initiated several changes that included a boycott of mainstream lectures. KBC workshops and student-led seminar presentations were designed along with a timetable that eliminated the need to share the homeroom. Not much could be done to change the assignment tasks but the turnaround in community attitude saw a more collegial or KBC approach to them and arrangements were made with the mainstream subject coordinators that assignments would be marked by KBC facilitators. This change meant that the students had achieved a divorce from the mainstream students and it signalled the start of a new phase of KBC 2000.
The timing of this student-led turnaround in community attitude was critical, as the SBL phase was due to commence within two weeks. It would have been detrimental to the KBC Project as a whole if the students had entered schools as apathetic, disgruntled learners.

It is important for facilitators to maintain the integrity of the KBC. It must be allowed to operate as it was intended and be free of the external pressures of the mainstream program. For this the KBC needs to be granted program status within the faculty. This would alleviate the major problems that the second year KBC students of 2000 experienced.

Program status is a means of qualifying for a formally appointed Director. Program status would allow for a transparent budget in terms of both financial and personnel resources. This status formalises the perception, both within and outside of the university, that the program is subject to the same principles of academic, professional, resource, and fiscal accountability as all other programs within the faculty. Some, (not all) of the assumptions inherent in KBC are radically different from those that underpin the mainstream teacher-education programs. The ripple effect of these assumptions has the potential for generating conflict unless everything about the KBC is transparent and all members of the faculty are kept informed of what the KBC program is all about.
What did the Students Learn?

When the session finished the students looked physically tired and said that they were mentally exhausted and at the end of it the question remains, what did they learn? From an academic standpoint all the KBC students passed their compulsory subjects so it would be assumed that they had met the compulsory subjects’ required outcomes. However the KBC students rejected the traditional way of doing things and only they can truly answer what they learnt in Session One 2000. For one student she stated that the ability to try things in the classroom context was important. The following quotation explains why she feels this way;

We have learnt practical things that we need to know - not what other people think we need to know. For example in second session last year (1999) when we went to mainstream people were telling us things and they all sounded brilliant. But not being able to try them in a classroom was very hard, it was always hard to picture what the lecturers were saying in the classroom context. Because we couldn't actually do it they tell you it will work but you don't really know. I tried a couple of things from last year's information this year in the classroom and they didn't work. We have learnt that every child is different and every child learns in a different way yet in a lecture there is no room for individual learning styles and that was one of the main reasons why we just couldn't keep going to them.

(Kinya: informal interview 19/5/00)

Kinya has clearly expressed one of the major reasons why she perceived that attending the lectures was of no significant value: that there was no room for individual learning. She rightly stated that as all children learn differently so do she and her colleagues. If it is obvious to the students that the lecture is not
meeting their needs the reason for its continued use as a tool for knowledge acquisition is questionable.

Karen concurred with Kinya when she said:

When you attend lectures you get a lot of information that the lecturer/s think you need to know but in KBC you get the opportunity to ask the facilitators the questions that you are struggling with and it is put out for general discussion. (Karen: informal interview 19/5/00)

For Fran however, the opportunity to openly discuss in the KBC homeroom contributed to what and how she was learning:

Because we are able to freely discuss the information that we were getting from school, the Forum etc and then were given the opportunity to freely scrutinise the information we were able to ask the how and why type questions. This meant that we were really able to draw meaning out of the topics that we were discovering.

(Fran: e-mail 19/5/00)

It can be seen that the KBC community way of doing things provided for the style of learning that these individuals preferred, and the overriding expectation that the students brought to KBC 2 at the start of Session One 2000. It is therefore, apparent, with hindsight, that the rejigged structure that combined mainstream and KBC was destined to fail. In 2001 when students from KBC 1 return to university to commence their second year studies the KBC must be true to itself and its underpinning philosophies. It must be allowed to continue as it was intended.
regardless of the subjects that the students are required to complete or the stage of their degree.

In this phase of community learning the students exercised and reinforced their empowerment. At the end of 1999 they were forthright when they verbalised what they knew they needed as learners, that they liked the opportunity that the KBC Project gave them to interview and work with teachers and investigate schools and how they operate. As a group they realised that they could bring about change if they put forward a logical and coherent alternative. To maintain the change they knew they needed to be united and that if they pursued individual gains the group as a whole and its community learning would suffer. To be an individual learner they said they might as well be in mainstream. With a change in attitude the students again started to collaborate and to view their assignments differently and do the best job possible with them. The students relearned quickly that Community Learning when functioning effectively could also support them in their SBL phase.

School-based Learning

What was learnt?

As shown, the second year students did not commence their second year of KBC in the most ideal fashion. It was vitally important that the SBL phase be successful. Prior to the commencement of session measures to ensure this success had been activated. With two KBC groups operating in 2000 it was important to recruit four new schools to cater for the extra students. It was decided that the
original schools would continue in 2000 with a new group of first year students as they had a working knowledge of the program. The second year students would attend the new schools as they could help educate the new schools and mentors about the differences between the traditional practicum model and the KBC.

In the fragile community of learners that was apparent in 2000 it was important not to allow a repeat of 1999 when the KBC very quickly divided and became a learning community of four competitive school groups. Therefore it was important to share the experiences of all the students at their various schools across the whole KBC when the students returned to campus after their in-school days. This proved successful and a vital component of the post-school campus day. There were several KBC students who had challenging pupils in their classrooms and strategies were sought from the whole KBC for tips on classroom management. Other KBC students sought advice from colleagues concerning lesson plans and resources. These sessions that related to school and classroom practice were a unifying influence for the fragile community. The SBL phase had assisted in reversing the negativity of the first four weeks of CL and once again SBL had the major impact. This again confirmed the importance that preservice teachers place on the school experience.

The Forum: Linking School and Community Learning

The findings from the SBL period showed that a surprise outcome was the asynchronous forum or computer-mediated-communication (CMC). This
technology proved extremely efficient during the SBL phase. The forum had two purposes: it was designed so that students could ‘keep in touch’ with each other whilst in their respective schools and as an assessment tool for one of the compulsory subjects. The forum however, also started to show positive signs of knowledge building. Although in cyberspace the knowledge that was being shared amongst the group related to complex issues of the school and classroom. It was not uncommon to have discussions ranging on an issue that the students had experienced in their school continue for periods of up to two weeks, with subsequent entries adding to or building on previous entries. There were also conversations that touched on sensitive and controversial issues. These conversations generally created animated and lively cyber-discussion.

However, CMC was not for all the students. Some students preferred to discuss issues in person. Although the principles of knowledge building were being applied in the various discussions, efforts to transfer these cyber-generated discussions to the classroom for open discussion often failed. The reasons for this are speculative and lend themselves to much more in-depth inquiry than this research project allows. Certainly the tempestuous start to the session often meant that even though general discussions relating to school and classroom practice were fruitful the attempt to discuss controversial issues was akin to walking on eggshells. This could have been due to the fact that the students felt safer writing and defending their entries in front of their computer screen rather than in the close confines of the homeroom. In a pure KBC the in-depth conversations that were found on the CMC space should have taken place in the KBC homeroom as well as in cyberspace. The fact that these discussions rarely occurred or when they
did were overly polite was a result of either the learning community’s “rocky”
start to the session or the fact that the students only contributed to the forum
because it was a necessary component for assessment in Curriculum and
Pedagogy II.

In future KBC discussion spaces such as the forum need to be assessment free.
There should not be a weighting applied to knowledge building. The process of
creating knowledge building conversations whether in real-time or via a
discussion forum should be free of grades. By attaching a percentage to this
activity the spontaneity and or true learning value of the conversations cannot be
known. The number of contributions or the value of the entries cannot be graded.
The problem of grades raised its head in the early days of 1999 when it was very
quickly realised that grades created competition amongst the KBC students. The
technology should be there for the students to use as intended i.e. to share, support
and collaborate on issues arising from their school experiences and not to simply
be utilised to fulfil a graded assignment task.

**What did the Students Learn?**

The SBL phase for the KBC 2 2000 students was intended to add to their
knowledge of wider school-based issues with a deeper understanding of the day-
to-day operation of the classroom. The students reported that the SBL phase was
successful. The school-based teachers were impressed with their level of
enthusiasm and dedication to the preparation of lessons and SBL generally. In the
schools, the students stated that they were learning what they needed to know. Classroom management and dealing with challenging pupils dominated a lot of the discussions held in the community. Several students stated that they learnt from their time in the classroom how children learn in different ways. This caused the KBC students to ask that if children learn differently how did mass lectures cater for the different learning styles of preservice teachers?

The students learnt from this session that individual learning and being in a position to ask questions was important for both KBC and school pupils. It is evident that, the KBC 2 group started the 2000 session fragmented and disenchanted but the SBL period restored much of the 1999 community as well as providing further valuable school and professional insights.

**Problem-based Learning**

**What was learnt?**

The KBC 2000 facilitators soon learnt that KBC students in their second year expected to carry out PBL and any attempts to compromise this were dangerous. It was foolhardy to expect that the students would accept the assignment tasks they were offered. In truth there was no PBL, which in turn meant that there was no ownership and no chance to carry out in-depth rich research by the students. The outcomes for successful implementation of PBL that were explored earlier in this thesis did not apply in Session One 2000. The decision to have KBC students carry out the same or similar assignments as their mainstream counterparts and attend mainstream lectures almost caused the downfall of the entire second year
program. The assignments were straightforward and the higher-order thinking skills that authentic PBL problems promote were not engaged. The lack of authentic problems to solve and a required attendance at mainstream lectures also significantly reduced the KBC 2 students’ motivation.

The process of carrying out PBL in 1999 had empowered the second year students to reconstruct their session to suit their learning needs. The mistakes and pitfalls of appeasement confirmed to KBC facilitators that meeting the challenge of implementing an alternative model of teacher education into the traditional constructs of the existing model was fraught with difficulties. Just as a square peg does not fit into a round hole the attempt to integrate the two models of teacher education was naïve. The problem of not having PBL was that there was no point of difference with mainstream and for some students the challenge of problem solving was the attraction to the KBC in the first place. The facilitators knew that when the students had reconstructed their program and their week to suit their needs to not lend their full support to this proposal would have seen an exodus of students back to the mainstream. This would subsequently have meant the demise of any future second year KBC programs. As previously discussed, the assignment tasks that had been set could not for university legal reasons be changed at the five week mark, however it was noted that the change in structure to the students’ week resulted in a change of attitude. The facilitators hoped that this new student attitude would at least see the resurgence of some of the principles inherent in PBL.
The evidence of the crisis of mixed modes and lack of PBL adds support to the necessity for the KBC to be a stand-alone program. Although a KBC Program will never be the size of the current Primary Education or Physical Education Programs on offer at UOW it would be comparable to the size of the Bachelor of Teaching: Early Childhood course which has full Program status.

**What did the Students Learn?**

The course of events in Session One 2000 re-emphasised to the students their power as a community of learners. They realised that if they supported one another they could achieve what they wanted for their learning. They learnt that the assignments could not be changed but also that supportive collaboration could assist in their completion. Although a pure KBC as it has been defined for this study was not established there is no doubt that without the intervention of the students the session would have finished for KBC 2 well short of the fourteen-week mark.

The assignment tasks were quite straightforward and theoretical in nature. They did not fit into the needs of the school and therefore were treated by the students as “just an assignment” (Shona: e-mail 30/4/00). This meant that the students were placed in the unenviable position of having a double workload. The students stated that they had their assignment work, which was of no use to them in the school, and then they had their schoolwork to prepare. It became obvious to facilitators and students alike that KBC needed the tasks of PBL to fit the school-
based context. In this way the learning in context and linking of theory and practice could once again take place. Although the problem packages of 1999 were difficult it was shown in 2000 by the KBC 2 students that they had in fact accommodated for learning to take place in the school context and preferred this to the project-based assignments that had be to “force fitted” in 2000.

Many of the skills that the KBC coordinator suggested that students would attain from being exposed to PBL were absent throughout the early stage of Session One 2000. However when the students said that they were putting “the KBC back into KBC” they started to once again show some of these skills that were predicted by Cambourne (1998a) and demonstrated in 1999 through PBL activities as part of the KBC Project. Although they were not doing pure PBL or functioning as a literature-defined KBC group in 2000 they were showing the following skills and attributes of problem based learners. The students were:

- initiating active, collaborative student centred learning processes;
- collaborating effectively as members of a team working to achieve a common goal;
- addressing their own perceived inadequacies in knowledge and skills; and
- developing problem-solving and self-educational abilities to meet the needs of their classrooms.

Each of the above will be explored below:
Chapter Seven: Session One 2000

Initiating active, collaborative student-centred learning processes

Once the students ‘restarted’ the session in week five of 2000 they were again active learners and worked collaboratively in their small school-based groups. If the work that was going on in these groups had transferred to the large group on a consistent basis then a KBC as Bereiter and Scardamalia (1989, 1991, 1993, and 1996) define it would have been evident. Although the assignment tasks were prescripted there was the need to undertake a great deal of group work and it was here that these small groups showed how collaborative and student-centred they could be.

Collaborating effectively as members of a team working to achieve a common goal

Although not PBL, the assignment tasks still required the students to collaborate as members of a team. The students used the experiences of 1999 and in conjunction with e-mail and the CMC established and maintained effective group work practices.

Addressing their own perceived inadequacies in knowledge and skills

When the students started the new structure they requested facilitation sessions related to areas where they felt they did not possess adequate knowledge. These areas would reflect issues that they had heard teachers talk about in their schools or discovered from their readings. It was not uncommon for the students to then
follow up these in-class sessions with extended thoughts and references on the discussion space.

*Developing problem-solving and self-educational abilities to meet the needs of their classrooms*

This was carried out effectively. It appeared that once the students removed the mainstream influence from their day-to-day program they settled back into the work of problem solving in the classroom. Post-school discussions in the KBC homeroom were always centred upon issues that had been experienced at school.

This is an interesting by-product because it highlights the possibilities of future PBL development in the KBC Project. Because the students were experiencing and looking at in-class problems naturally this should be made a necessary component of any PBL that KBC students need to carry out. By becoming a classroom anthropologist the students can relate any of the daily classroom operations or school programs to the requirements of any of their elected or compulsory subjects. This would link theory and practice explicitly.

When the students once again said goodbye to KBC to return to mainstream for Session Two 2000, friendships and working relationships had been cemented. They had grown in confidence and were visibly empowered. They were forthright when expressing their needs. However, one question that remained unanswered at the end of Session One 2000 was, “did a true KBC operate”? In short the answer is, no. The session ended as it started with four sub-groups working to support one another and add to their own group’s collective knowledge. But if the true
definition of a KBC as proposed is applied i.e. individuals working towards the whole collective advancing their knowledge then the answer is certainly no. We had glimpses of knowledge building albeit in cyberspace but in truth the chances of a textbook KBC ever really being achieved in the climate of Session One 2000 were always “against the odds”.
Chapter Eight: The Development of a Constructivist Grounded Theory

The previous three chapters have described the students’ experiences in the alternative teacher education project known at the UOW as the KBC Project during 1999-2000. There were many instances where implementing an alternative model of teacher education was fraught with difficulties and constraints. These constraints were shown in the previous chapters to be both internal and external to the project. The primary purpose of this study was to develop a constructivist grounded theory that describes and explains the nature of the relationship/s between the Knowledge Building Community (KBC) Project and the experiences of its pioneer cohort of preservice teachers.

The study had three aims:

• to understand the relationship/s among the cohort of students, the school-based teachers and the university facilitators;

• to understand the students’ perceptions of what it meant to be a pioneer student in an alternative mode of teacher education; and

• to explain what happened to the students as learners in an alternative mode of program delivery in teacher education.

A constructivist grounded theory method focuses on people in their natural settings and this made it an ideal methodological approach for research on the KBC Project. Using the methodology proposed by Charmaz (2000), a constructivist grounded theory results in an understanding of the experience from the standpoint of those who lived it, “a constructivist grounded theory method
recognises that the viewer creates the data and ensuing analysis through interaction with the viewed” (Charmaz, 2000, p. 523). This open-ended approach ensured that issues salient to the respondents would emerge.

The key findings from chapters five, six and seven in relation to constructing the grounded theory are:

- **Community socialisation**
  When the students were working in a supportive environment where collegiality and friendship were promoted, they stated that learning took place almost unconsciously. This collegiality promoted the constant sharing of ideas and hence learning. The data to support this aspect are presented throughout the previous three chapters and in particular examples of *community socialisation* are to be found herein on pages 169-70, 171, 190-91, 238, 240, and 287-88.

- **Understanding Group Dynamics**
  The formation and maintenance of effective working groups was an important part of the KBC process and it was vitally important that the students understood the concept of group dynamics if the project was going to succeed. It was reported throughout the thesis that when the students lacked awareness about the governing rules for groups and teams, then their efficiency and ability to complete designated work product was affected. Supporting data relating to the issues surrounding group dynamics can be found on pages 170, 172, 175, 190-92, and 194.
Chapter Eight: The Development of a Constructivist Grounded Theory

• **The nature of the relationships that were formed**

The KBC Project by its design saw the establishment of a triadic relationship between preservice teachers, school-based mentor teachers and university facilitators. This factor is due in part to the university facilitators working with the students in the schools. One of this study’s aims was to examine the nature of this triadic relationship and the role each stakeholder played. The examples on pages 174-5, 229 and 282, illustrate the importance of the relationship between the students themselves, and the students with the school-based teachers. Pages 156, and 284, report on the emerging collaborative relationship between the schools and the university. However, pages 170, 182-83, 229, 252, and 261, highlight the facilitator relationship as well as the facilitator-student relationship. The various data sources highlight the importance of the contribution of all stakeholders and the metaphor of a tripod could be used to describe this. Unless all three relationships are well established the process can become unbalanced and like a tripod with uneven legs it is unstable. Unstable relationships in the KBC process make knowledge building difficult. Knowledge building requires students to **trust** that their colleagues are working towards shared goals. Therefore, **trust** becomes a required element in the knowledge building process if **friendship** and **trust** are not present among the student cohort this process is unlikely to occur. This factor was highlighted when the pioneer students were in KBC 2 and is featured in the section in Chapter Seven entitled: “The Powder Keg Explodes”.

• **School-based groups taking responsibility for their own learning**

Once the school groups had been formed it was the underlying premise that they would start to take responsibility for their own learning. This meant that they
would meet regularly in their school-based groups, share knowledge, and thus build onto each other’s knowledge base. This process would then allow students to identify the areas of investigation that they needed to undertake in the school or theoretical context. Examples of this behaviour are to be found on pages 159, 169, 230, 235-6, 271 and 277.

• Friendship and Trust

The presence of friendship and trust within the group helps them to form responsible school teams that undertake their professional obligation in the school and in the homeroom. Further these aspects are intertwined, as friendships and trust that were created in the community triad directly influenced the experiences of the students during this period. When students develop friendships, the trust they build provides a foundation that should enable them to work collaboratively in school teams with their school-based mentors. Examples of the value of friendship and trust are located on pages 162-3, 181, 245, 250, 262 and 280. However, examples of the opposite i.e. when trust is lost can be located on 177 and 262-4 and these clearly illustrate what happens when this occurs.

Therefore, the five key findings previously mentioned highlight the importance of a structure promoted by a KBC model to promote social interaction between the main participants. When students are given the opportunity to create friendship and trust in their school teams they can develop responsibility for their learning and with the support of the community triad (the KBC facilitators, school-based teachers and each other) they can develop ownership of their learning. Importantly, having the KBC facilitators work with the students at university and in the schools helps to keep the triad functioning.
A constructivist grounded theory that has emerged from the data has highlighted that the support of the community triad is the base from which all else operated. The *friendship* and *trust* that were created in the community triad directly influenced the experiences of the students from February 1999 through to June 2000. This was evident in week one of Session One 1999 when Siobhan stated that the *friendships* she was making in the KBC homeroom meant that she “didn’t feel lonely and that she always had someone to have lunch with”. She went on to question, “how you could ever learn when you felt lonely at university?” The reverse to this situation was illustrated in Session One 2000 when the *trust* that the students valued was being threatened (see “The Powder Kegs Explodes” Chapter Seven). During this difficult period it required the efforts of the facilitators and the students themselves to re-create the sense of community.

The KBC Project was intended to provide students with quality learning experiences. What emerged, however, was that the social interaction and support of each other and/or the facilitators and/or the school-based teacher mentors as provided by the KBC structure served as the greatest influence on any or all of the students’ experiences. In schools the KBC students felt supported by their mentors and were encouraged to take risks. Likewise on campus the unrestricted access to the facilitators allowed for the process of co-learning between the students and the facilitators to develop. The homeroom atmosphere and developing *friendships* ensured that *trust* among the students was becoming a stable platform for them to build knowledge.

The development and formation of the community triad is an important component of this alternative model of teacher education. This is especially the
case in view of the complexity of the knowledge building process, which is explained on pages 72-74 in Chapter Three. Because knowledge building takes place in two contexts i.e. the school and the university, the community triad has the common factors that support the students in either setting. Knowledge building in these two contexts is difficult and therefore a social structure is vital to underpin the design of the KBC model.

Figure 8.1 is the constructivist grounded theory demonstrating the social structure necessary to replicate a community triad for any future KBC cohort to include students, university and school staff. This figure not only shows the component of a social structure but also highlights the importance of them linking together and the presence of a homeroom to promote a sense of belonging. The planning for this needs to be done prior to students entering the KBC project or any of the participating schools. The creation of the community between KBC facilitators and school-based staff needs to be viewed as a partnership. When operating efficiently this partnership will keep each other informed or 'in the loop' as to the progress of the students in either setting. Although in the haste to commence the KBC Project in 1999, school inservice opportunities were few, in future, however, this is an aspect that needs to be improved.

Figure 8.1 (see page 327) illustrates the social structures that underpinned the formation of the KBC at the UOW as emerged as the key findings from the data. This figure depicts the relationships that were created throughout the 1999-2000 KBC Project. The figure outlines the components and relationships that lead to the formation of a KBC.
Figure 8.1 Social structures required to underpin a KBC.

Chapter Eight: The Development of a Constructivist Grounded Theory

University facilitators

obtain

KBC Homeroom

KBC Cohort selected

Community Socialisation

achieved through

Team building activities

Friendship

Trust

Collaborative School Teams

working with

School based teacher
MENTORS

Aims/Purpose

• Stability
• Sense of belonging
• Point of difference

Through application and interview

To develop an understanding of group dynamics

Taking responsibility for their own learning

Figure 8.1 Social structures required to underpin a KBC.
Figure 8.1 is a representation of the processes and structures that lead to the formation of a KBC at the UOW. A dominant feature of this figure is the heavy black line that connects the major stakeholders. As the learning in a KBC model requires a coherent relationship between learning in school and at university the role of members of the triad is crucial to the success of the program. The role of each of these stakeholders is discussed below.

University Facilitators:

The university facilitators are responsible for the coordination of the program, the school liaison and the recruitment of students. In terms of the coordination it is the facilitators’ duties to ensure that students meet the outcomes of the subjects in which they are enrolled. This aspect requires meetings with mainstream subject coordinators and lecturers, as well as regular KBC facilitator meetings that discuss and debrief the students’ progress. In 1999 when facilitators were not meeting regularly or were indeed not seen to be working as a team the students quickly noticed it. It is important in a project such as this that unity and teamwork is not regarded as only a student expectation.

The KBC Homeroom

An important component of the KBC Project is that the KBC facilitator team must arrange a designated homeroom and it must be obtained prior to the students’
arrival on campus. The homeroom must not be a common teaching area; it needs to be for the sole purpose of KBC teaching and learning activities. This physical space plays a vital role in the establishment of the KBC. The homeroom provides stability, a sense of belonging, and a place to display work products and emphasises a point of difference from the traditional mainstream. It is the location where all workshops are held. The impact of not having access to the homeroom was not fully understood until Session One 2000. The situation of having two groups and only one homeroom meant that the KBC 2 students were without a permanent base and although teaching rooms were obtained for workshops, they were common teaching areas and the students could not stay in the rooms longer than the booking allowed. Quite often the rooms were located in buildings other than those that were designated to the Faculty of Education. The overlap of students saw KBC 2 students displaced and disorganised. KBC 2 students were often seen working in the cafeteria. Fran stated that they had lost their sense of identity; Katherine complained that they were no longer special; but Siobhan summed it up by saying that being on the move from room to room made the students feel that they were just another tutorial group. It became obvious that creative timetabling was necessary in order to accommodate two groups in one room.

**KBC Cohort Selection Process**

Another role that the KBC facilitator plays is that of recruitment of KBC students. In 1999 students were informed of the KBC Project via brochures that were handed out on enrolment day in January and then again on the Faculty of
Education's information day in February. This process was repeated in 2000. Students that expressed an interest in joining the project were asked to write a letter of intent and including Curriculum Vitae. It was thought that the number of students seeking admission to the program would dictate an interview process. A panel of three senior lecturers was selected to cull the applications and then carry out any subsequent interviews. As previously reported this process was not necessary, as the numbers of students did not warrant it. It is however a step that must be included into any 'formula' that attempts to outline the steps required forming a KBC Project.

Community Socialisation

When the students have been recruited through an application and interview process the KBC facilitators then undertake the process of community socialisation. Workshops and team building activities that allow students to meet and work with each other and learn about group dynamics can foster a sense of community. As the students spend time together friendships emerge. As the students begin to grasp the principles of group work and get to know one another and how one another works then trust will also begin to play a role.

When students develop friendships and trust they have the basis of a foundation that should enable them to work collaboratively in school teams with their school-based mentors.
Collaborative School Teams

*Collaborative school teams* are needed for the triadic relationship to form. These *collaborative school teams* share the roles of educational anthropologists, problem solvers and mentee.

As educational anthropologists, the students develop structures and processes that help them to understand their mentors’ classroom. They also need to be able to as identify teacher ‘informants’, these teachers may wish to offer other insights and information about teaching, learning, children and schools. When the school teams are working *collaboratively* they will begin to share *responsibility for their learning* ensuring that they work as an efficient team of learners who collectively find and share knowledge.

Ideally these teams will be able to work outside of their school team, sharing insights with all members of the KBC. The process of knowledge building often takes place when the teams return to the homeroom but as seen in 1999 this is a process that needs facilitation it doesn’t happen immediately. Success is reliant on the facilitating team carrying out their role in regards to school liaison and ensuring that all participating schools and mentors know their roles and responsibilities in the KBC Project. For example, in 1999 when one school site offered different learning opportunities and experiences it was not anticipated that this school’s model would have the ramifications that it did on the whole KBC community. The differences at this school site caused angst not only for the students who attended this school but for the other school groups who reported
feeling guilty that their school experiences were operating smoothly and productively.

The School-based Teacher Mentors

The third aspect in the community triad is the role that the teacher mentor plays. This role cannot be underestimated. When the students commence in the schools after approximately five weeks of session one, it will be their teacher mentor that they turn to for advice and support. The relationship that is created between mentor and mentee will be pivotal for the SBL phase. The pioneer students rated their time in schools as beneficial because it was here that they were able to experience the day-to-day operations and come to grips with the multi-faceted role of teachers. Just as the students reported that they were learning from their mentors, the mentor teachers reported that they too were learning from the Teacher Associates.

In order to maintain the working relationship/partnership between the university and the schools the university facilitator must maintain a presence in the schools. When the facilitator, the school-based teacher and the KBC students are all in schools at the same time it cements the triadic relationship that underpins the KBC Project.
The Importance of a Social Structure for Models of Teacher Education

Comparison to Traditional Teacher Education Models

The review of the literature (Chapter Two, p. 18) revealed that the aim of teacher education has at its basis the production of effective and competent teachers. Traditional models of teacher education described on page 24 used throughout the world are very similar and have tended to focus on what teachers need to know and how they can be trained (Carter, 1990; Diamond, 1991).

Diamond (1991) believed that central to the most common teacher education models were three basic components. These were listed as: (i) academic preparation in the subjects or disciplines that the preservice teacher will teach when qualified; (ii) theoretical foundations of professional education; and (iii) the student practicum or teaching in some form of internship.

Since the introduction of compulsory primary education there have always been major trends identifiable in teacher education. These trends have dominated the way in which prospective teachers were taught their future craft. The earliest trend in teacher education was a straight apprenticeship model and teachers were awarded accreditation by the school Inspectorate (Tripp, 1994). Since the abandonment of this model there have been at least five traditional models that have dominated the discourse of debate in teacher education. These models of teacher education are: "behaviouristic, competency-based, personalistic, traditional-craft, and "inquiry-orientated teacher education" (Zeichner, 1983).
Behaviouristic teacher education (BTE) is perhaps the most influential of general approaches to the education of prospective teachers. Its underlying structure however is similar to the Competency-based teacher education (CBTE) model, which states that there are certain skills and competencies that are taught to preservice teachers. This viewpoint situates teaching as a science where there are skills to be taught which are considered to be the most relevant to the teaching role and assessment of them is measured by performance at a specified level of mastery. These models differ greatly from the KBC Project at the UOW, which saw the students try out teaching strategies in the classroom at their own pace and with the support and guidance of their mentor teacher. The students were given constructive advice and were not judged on their attempts or degree of mastery. They certainly did not receive a quantifiable mark for their efforts in the classroom. The introduction of PBL as one of the underpinning learning principles of the KBC Project also meant that the KBC students were not undertaking formal examinations.

The TCTE and PTE models focus on content knowledge. These models are concerned with students acquiring classroom strategies that are learned and then applied. In the KBC Project because students are working in the schools as educational anthropologists they are observing more than one teacher and therefore are witnessing many different teaching strategies. In the KBC Project it is these observations that are brought back to the KBC homeroom and in knowledge building fashion are shared with the whole KBC community.
The traditional model of PTE emphasised the reorganisation of teacher perceptions and IOTE looked at fostering a form of inquiry about teaching. The KBC Project also fostered inquiry among the students. Inquiry was an important element of the problem-solving processes that the students went through in order to complete their assessment tasks. This inquiry also led to healthy discussion and debate in the homeroom in 1999 - 2000 as well as featuring heavily in the CMC in 2000. The traditional models of PTE and IOTE also placed an emphasis on everyday classroom issues and saw that developing caring relationships with students as a necessary component of teaching. The design of the SBL pattern in the KBC Project saw that the students were in schools for a longer period. This time allowed for school and classroom relationships to emerge, the combined school and KBC students book launch (see Looking for Fish, Chapter Seven p. 290) is evidence of this feature.

The emphasis of the IOTE model saw the preservice teacher as an active agent in their teacher training compared to the CBTE and TCTE models, which situated the teacher education students as passive recipients of knowledge. Again comparison can be drawn with the KBC Project and the IOTE model of teacher education. These modes both ensure that the preservice teacher is proactive in their pursuit of knowledge. Unlike CBTE and TCTE where the students are passive recipients of knowledge the KBC Project integrated the curriculum in an effort to decrease duplication and fragmentation. In the school site it allowed for contextual learning that enabled students to become aware of the culture of schools and the complexity of a teacher's role.
These five models have as their basic concern content knowledge delivery, the reorganisation of teacher perceptions and the fostering of some form of inquiry about teaching. Despite the decades of reform and implementation of teaching models as those shown above, teacher education is criticised for ignoring the voices and needs of preservice teachers, providing and promoting an unrealistic view of teaching, and perpetuating the transmission model of teaching as telling (Cochran-Smith, 2001; Kagan, 1992; Korthagen, 2001; Olsen & Osborne, 1991; Russell & McPherson, 2001; Smith & Shapson, 1999; Vann, 1999).

The IOTE, traditional teacher education model had several areas of overlap with the KBC Project i.e. active preservice teachers, critical inquiry, classroom focus and reflection. However, the KBC model promoted the importance of the community triad as a structure to promote social interaction. The traditional models cited above do not provide for the development of a community triad nor a social structure that is based on friendship and trust to support the students.

The community triad could not operate unless the students' social interaction is characterised by friendship and trust. Without friendship and trust the process of knowledge building cannot operate efficiently. Social interaction among the students constitutes the basis of a successful KBC and is the missing component in any of these pre-existing traditional models of teacher.

Table 8.1 illustrates that the KBC Project addresses the criteria of the selected traditional models of teacher preparation by including the components prescribed
Chapter Eight: The Development of a Constructivist Grounded Theory

by Diamond (1991), however it also shows that the KBC model has another important feature in its structure - the opportunity for sustained social interaction.

<table>
<thead>
<tr>
<th>Model</th>
<th>Fundamental foundation</th>
<th>Emphasis</th>
<th>Reflection encourage d</th>
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| Behaviouristic Teacher Education Model (BTE) | • Positivistic epistemology  
• Behaviouristic psychology               | • The observable development of the skills of teaching  
• Teaching is viewed as a science  | No                                                                  |
| Competency-based Teacher Education Model (CBTE) | • Compartamentalises the act of effective teaching  
• That learning teaching can be achieved by watching | • That there are certain goals and tasks to be learned  
• Teaching is viewed as a science | No                                                                  |
| Personalistic Teacher Education (PTE)      | • Preservice teachers were taught a set of classroom strategies that they learn and applied | • PTE emphasises the reorganisation of perceptions and beliefs over mastery of teaching skills.  
• Emphasised the need to create emphatic and caring relationships with students. | Yes - Only since 1991 when PTE has been re-investigated |
| Traditional-craft Teacher Education (TCTE) | • Teaching is a craft  
• The preservice teacher is seen as an apprentice  
• The preservice teacher is a passive recipient of knowledge | • Preservice teachers acquire knowledge about teaching by trial and error | No                                                                  |
| Inquiry-orientated Teacher Education (IOTE) | • The development of inquiry about teaching  
• Preservice teacher is an active agent in their teacher training | • Critical inquiry is a necessary supplement to teaching skills  
• To prepare teachers who have skills to do and then analyse what they are doing in terms of its effect on children  
• Focuses on everyday classroom life | Yes                                                                  |
| The KBC Project at UOW                    | • A constructivist, problem-based approach to pre-service primary teacher education  
• Replaces traditional lectures, tutorials and exams by establishing a Knowledge Building Community (KBC)  
• The KBC provides for social interaction, friendship and trust to be created in collaborative school teams | • Student-centred  
• Friendship-based school groups  
• School mentors  
• Co-learners with facilitators and mentors  
• Linking theory to practice  
• Collaborative practice  
• Problem solving  
• Emphasises teaching as life-long learning  
• Prepares students on how schools and classrooms operate and do business (every day school life) | Yes                                                                  |

Table 8.1: Five Traditional models of teacher preparation compared to the KBC Project at the UOW

Table 8.1 is a comparison between the ‘traditional’ models of teacher education and the KBC Project.
Comparison to Innovative Models of Teacher Education

Chapter Two also illustrated several ‘innovative’ models of teacher education. Russell and McPherson (2001) stated for a teacher education program to be considered as innovative it needed to meet certain criteria. In particular they said that it was essential that teacher education courses make explicit what teachers actually do and think in the course of planning, implementing, and evaluating their teaching. They also went onto include reflection as a component of the course. However they also included that the creation of “collaborative environments within student cohorts, between school boards and faculties, within university departments, and among teacher educators, trained mentors, and candidates” (Russell & McPherson, 2001, p. 5) was necessary in any innovative teacher education program.

In Chapter Two several models of teacher education considered as innovative and currently in operation in the United States of America and Europe were examined. Like the KBC Project at the UOW, Project Opportunity at ISU, the Santa Cruz New Teacher Project at the University of California Santa Cruz (UCSC), the Contextual Teaching and Learning Project at the UOL and High Quality Teacher Education Project at UTEP, all supported collaboration between the university and the schools. These models place this partnership as fundamental to the design of their teacher education innovation. The emphasis on field-based experience is dependent on collaboration between the faculty and the participating schools. Moreover, the use of extensive structured field based experiences prepares the students for the reality of classroom life.
The strengthening of the school-university partnership benefits the preparation of teacher education students because they are learning in context. This partnership as reported by the UOL emphasises student teachers to focus less on "doing it right" and more on understanding what they need to do in order to learn important content. As educational anthropologists, the KBC students were encouraged to focus on what they needed to understand about how schools operate and children learn. It was important for the KBC students to investigate what it meant when a group of adults and children met at a conglomeration of buildings rather than pass a prescribed number of predetermined teaching skills. The strengthening of the school-university partnership in the context of the KBC Project has seen a working relationship develop between the two institutions that has resulted in a mutual set of goals being developed i.e. the improvement of teacher education. It is envisaged that like the practice at UTEP where teacher education is collaboratively designed and managed the improving working partnership between the UOW and the participating KBC schools will also have this end result.

The use of cohort groups amongst teacher education students is particular to the KBC Project and Project Opportunity. The use of the cohort groups according to Brannan and Reichardt (2001) provides the participating students at ISU with a sense of belonging, this assertion is a feature of the KBC Project also. The KBC students featured in this research although at times went through ‘rough’ patches they always identified themselves as KBC students. Examples of this sense of belonging were linked to the KBC homeroom it became a central space it was the place that allowed for their identity as KBC students to develop. This aspect was
never as obvious as in Session One 2000 when the students were without this central space. The need to change rooms to conduct workshops caused the students to complain that they “were just another tutorial group”. The KBC Project gave the students a sense of belonging and even as mainstream students they were witnessed to work and sit together. When questioned as to why they still chose to carry out assignment tasks with other members from the KBC they stated that they knew how each other worked. They trusted each other to complete set tasks.

Like the KBC Project the Contextual Teaching and Learning Project at the UOL centres its curriculum on problem-based learning activities. The UOL program’s emphasis is on inquiry, with a commitment to preparing teachers to adopt a problem solving perspective with respect to their practice. Faculty staffs encourage the teacher education students to experiment with inquiry-based approaches in their classroom practicum, internship, and student teaching placements. Teacher education students are encouraged to view themselves as learners, to collect data about their students’ learning and their teaching practice, to form critical friendships with their colleagues, and reflect on their own practice through journal writing and continued professional development. It is anticipated that these efforts will help graduates to focus on their students’ learning rather than their own teaching performance. Although the two models have certain similarities i.e. curriculums based on PBL, using the school to collect data (educational anthropology) and an emphasis on reflection there are also notable differences between the two models.
The UOL approach does not mention how the relationship between the university staff and school based staff is viewed. While the UOL model states that the students should view themselves as learners, and are encouraged to form critical friendships with their colleagues, it is not stated what form this friendship should take. The KBC Project's Community Learning principle is quite specific. Community Learning states that the relationship between the members in this triad (the students, the facilitators and the school based teacher mentors) are all co-learners. As a co-learner the university lecturer takes on the role of facilitator. The venue of the homeroom allows for a more personal teaching style to develop instead of large lecture hall presentations. As a facilitator the time spent in the schools not only cements the working relationship between the university and the school but allows the facilitator time to observe and discuss classroom practices. The time in schools also provides the facilitator an insight into how his/her students are establishing themselves in the school and classroom context. The change in role of the school-based teachers from 'clinical supervisors' to mentors also allows for a more holistic relationship to develop between the KBC student and the mentor. When the three parties of the triad are in the same place it is yet another example of how the social interaction and structures of the KBC Project are in operation.

The role of mentoring is not new and the importance of it to the KBC Project cannot be underestimated. The relationship between the KBC student and his/her mentor is not only vital to the social structure of the KBC Project it can impinge on whether SBL is a positive or negative learning experience. While it is hoped that the SBL experience will be successful and beneficial to the KBC student, the
university cannot control what happens in the school setting. For this reason it is important for the KBC facilitator to maintain the school liaison visit. The SCNTP also incorporates the use of mentoring. Mentoring is a central component of the SCNTP model therefore the relationships that are formed between the mentor and the mentee are important for the ongoing success of the model. The mentors meet weekly with each novice for approximately two hours before, during or after school providing mentees context specific support. Likewise in the KBC Project the mentors and mentees met regularly to discuss concerns, issues or upcoming classroom activities that the mentor teacher thought would be beneficial for the students to participate in or observe.

Reflection based on classroom experiences is encouraged as a component of the SCNTP and the Realistic Approach to teacher education proposed by Korthagen and Kessels (1999). These models have this component in-built to provide a means for students to improve their practice based upon their reflections. The KBC Project also encouraged the students to carry out reflection and the students participated in several workshops that demonstrated how to carry out this task. Reflection is further supported in the Realistic Approach to teacher education because the concerns and problems that the students identify based on their classroom experience acts as a basis for program delivery. This form of content delivery synonymous with the Realistic Approach and the KBC Project means that facilitation needs to be flexible as it needs to be matched with the students' concerns, it also ensures that knowledge building is taking place. Knowledge building is occurring because students are sharing and hearing about the experiences of their colleagues from other school sites.
Initial teacher education programs should provide preservice teachers with the skills, knowledge and attitudes that will help them establish a strong foundation for effective teaching, reflecting on classroom experiences allows teacher education students to discuss and relate to theory what they are observing.

Table 8.2 offers a comparison with the five innovative models discussed above and the KBC project at the UOW.

<table>
<thead>
<tr>
<th>Model</th>
<th>Where</th>
<th>Underpinning Design Principle</th>
<th>Fundamental emphasis</th>
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| Project Opportunity                        | Iowa State University        |  • Student cohort groups  
  • Extensive field experiences                                                                 |  • Cohort groups provide students with a sense of belonging  
  • Collaboration  
  • Encourage commitment to the profession                                                                                  |
| Santa Cruz New teacher Project             | University of California –  
  Santa Cruz                   |  • Mentoring of beginning teachers with Faculty and school-based teachers  
  • Focuses on the transition of preservice teachers to beginning teachers                                                        |  • Learning to teach equals life-long learning  
  • Collaborative environment  
  • Reflection of teaching practice ensures professional development                                                                 |
| Contextual Teaching and Learning Project:  
  A PBL Approach                           | University of Louisville     |  • Collaboration with local schools to promote contextual learning experiences                  |  • That teacher education cannot be separated from knowledge of the context in which the phenomenon occurs  
  • The program’s curriculum is centred around problem-based learning activities                                                                 |
| The High Quality Teacher Education Project | University of Texas: El  
  Paso                         |  • Collaboration and partnerships with schools  
  • Partners contribute to the teacher preparation program                                                                  |  • Increased classroom time  
  • The incorporation of technology with teaching practices                                                                            |
| The Realistic Approach                     | IVLOS Institute of Education |  • An integration of several older approaches; the theory-based approach, competency-based methods and reflection  
  • Emphasis placed on specific concerns questions, and problems student teachers face                                                  |  • Create suitable learning experiences  
  • Promote awareness and reflection in student teachers  
  • Offer theoretical notions from empirical research  
  • Train students to be proactive                                                                                                          |
| The Knowledge Building community project   | University of Wollongong     |  • A constructivist, problem-based approach to preservice primary teacher education in collaboration with local schools.  
  • The KBC provides for social interaction, friendship and trust to be created in collaborative school teams                    |  • Cohort groups  
  • School-based teacher mentors  
  • Emphasises teaching as life-long learning  
  • Prepares students on how schools and classrooms operate and do business (every day school life)                                      |

Table 8.2: A comparison of International Innovative Teacher Education Models and the KBC Project at the UOW.
In summary the various innovative models of teacher education highlight several notable features:

- cohort groups (ISU);
- collaboration between the university and the schools (SCNTP, UOL, UTEP);
- mentoring (SCNTP);
- problem-based learning (UOL); and
- reflection (IVLOS Institute)

However, the proposed KBC model appears to be the only one that encapsulates all of these features. Fundamental to a KBC model that incorporates so many innovative features is a social structure that supports students in making the necessary connections with the complex process of knowledge building.

The social interaction, whether in the four school-based groups or the larger community, supported the students' experiences. Although there were times when the community reached low points, the opportunity to talk or write with people who had had similar experiences gave the students authentic brainstorming and problem-solving sessions. This aspect reinforces the constructivist grounded theory i.e. that the social structure featuring support of having the trust and friendship in the community triad is the vital component for the creation of a KBC in teacher education.

The next chapter will provide implications from the study and recommendations for future directions of the KBC Project as well as suggestions for further research.
Chapter Nine: Implications and Recommendations

The aims of this study were to understand the relationships, the perceptions about what the KBC Project meant for the students involved and how it impacted on their learning experiences. The research showed how the community triad emerged as one of the greatest influences on the students' experiences. This chapter includes implications of the research, recommendations for the KBC model and suggestions for further research.

Implications of the Research

Maintaining the Social Structure

The research showed that the KBC Project's three learning principles of CL, SBL and PBL were underpinned by the importance of a social structure. This social structure was illustrated in Figure 8.1 (Chapter Eight, p. 327) and is the constructivist grounded theory of this thesis. As the learning in a KBC model requires a relationship between learning in school and at university the role of members of the triad is crucial to the success of the program. The type of learning proposed by a KBC model necessitates that the students make their own connections between what they see in schools, read about and discuss at university. In particular, they need regular contact between members of the triad. Therefore, it is of vital importance that measures are put in place that will guarantee the maintenance of this social structure. The following
recommendations are proposed to address the needs of the triad members: KBC Project planning days, mentoring inservice for school staff, joint conference attendance by triad members, recruitment of KBC facilitation staff, and developing an understanding of the role of the KBC student, by the students themselves.

**KBC Project Planning Days**

This proposal has at its basis the potential to allow all the stakeholders to feel an integral part of the program and at the same time it maintains the social structure of the KBC Project. The planning days give the members of the triad the opportunity to have input into the ongoing direction of the KBC Project. KBC Project planning days should be conducted at the beginning and at the end of the school year.

The end of year planning day would provide members of the triad to undertake reflection on the events that worked or didn’t work throughout the KBC school year. It would also allow proposals to be put forward for the next year’s project. The planning day at the beginning of the year would then report back to the school based staff the changes that have been put into place based on their input. The planning day would also allow the school-based staff a voice into suggested assessment tasks that the students could undertake in their schools. This day would also allow school staff to meet any new mentor teachers coming on board the KBC Project. This would see experienced mentors mentoring beginning teacher mentors and thus the social structure remains constant. The planning day
at the beginning of the school term would also introduce new KBC 1 students to the school-based teacher mentors in a relaxed environment and away from the hustle and bustle of the school and classroom settings.

**Mentoring Inservice**

This aspect would cater for staff inservice education at participating schools by KBC facilitators. Over the last two years the KBC Project has asked for mentor teachers in the participating schools. On the face of it this request does not present a problem, but the transition from ‘clinical supervisor’ to ‘mentor’ is yet another cultural shift. School-based teachers who have ‘supervised’ preservice teachers in the past need to understand the difference from this role to that of a ‘mentor’. Carrying out this form of inservice allows for a shared meaning to evolve about the nature and details of the mentor role for the KBC Project. It is envisaged that KBC Project inservice would be carried out to school-based staff at times that were convenient to them.

**Joint Conference Attendance**

This proposal allows for all members of the triad to be seen and heard equally, by the education community. Joint conference attendance and collaboratively written research papers demonstrates to the education community that the social structure is not just ‘lip-service’ but a genuine effort by all parties to improve teacher education. For the school-based staff it demonstrates that their role is valued by
the university and for the students it confirms that they are viewed as co-learners and colleagues.

Recruitment of KBC Staff

The situation that arose in 1999 saw the KBC staff trying to juggle the commitments of both the mainstream and the KBC Project. It was soon evident that it was not possible to mix the two workloads and at the end of 1999 three of the five staff withdrew from the KBC citing burdensome workloads as their primary reason for doing so. Since then three staff have carried the bulk of the teaching commitment with the KBC groups. Of these three, two are employed on a part-time basis yet work above their allotted hours and, the third member has managed to dedicate three hours per week from his already over-committed load. Obviously this situation cannot continue. The KBC Project, as already stated requires a cultural shift from the traditional role of lecturer. The hours that are considered as face-to-face teaching as well as maintaining the university presence in the eight schools do not fit the mainstream workload calculations. The university should apply workload calculations that fit this unique program. Apart, from workload commitments that mainstream staff have cited, they have also stated that until there is an equitable allowance for the work that is required of them in the KBC Project they would not join the KBC team.

One approach is to employ KBC staff that does not have mainstream teaching commitments. This way KBC homeroom time is not compromised and the necessary school visits are maintained. More importantly, the time spent in the
schools could be extended to include more time in the classrooms alongside the KBC students. KBC students and facilitator need to observe lessons and discuss them together at their conclusion. The notable impact of this is the constant maintenance of the social structure. This school liaison serves to strengthen not only the school and university link but also the link between practice and theory.

**The Role of the KBC Student**

To maintain the social structure it is important for all members to be aware of the roles and responsibilities of each other, this includes the KBC students. The KBC student is the common link between the university facilitator and the school-based teacher mentor. The KBC student needs to understand how they fit into the community triad and the role that they are expected to play. This understanding will benefit the students when they move between the two learning settings, i.e. the school and the university.

The KBC student needs to be proactive and want to take responsibility for his or her own learning. They should like open and interactive debate and enjoy the prospect of questioning and investigating in the school setting. The KBC Project is best suited to students who like working in groups and collaborating with each other. In the KBC Project students need to accept that they need to collaborate with each other not compete against one another. Because of these ideals it is important that students are informed of these expectations before they commit to the KBC Project.
Chapter Nine: Implications and Recommendations

The social structure that underpins the KBC Project relies on the roles that the school-based teacher mentor and university facilitator plays and these members need to accept that informed students will be questioning and investigating their practice and viewing themselves as co-learners.

Recommendations for Future Directions of the KBC Project

The Role of Problem-Based Learning

At the conclusion of Session One 2000 it was demonstrated that the KBC could stand as an alternative model of teacher education. It was evident that a KBC in teacher education could be formed despite difficulties in implementing PBL. The principles that underlie PBL are sound, therefore the KBC Project needed to take advantage of these principles and develop a working model that provided for integration of the compulsory subjects with PBL.

The KBC Project has shown that students who undertake this model of teacher education recognise the culture of schools and classrooms, the role of teachers and the importance of empowerment. Through involvement in a KBC preservice teachers learn early the value of community collaboration, taking responsibility, problem solving and reflection. These are all qualities that the teaching profession requires in its beginning teachers.

The question therefore remains as to how best to modify the project as it currently stands so that it still meets the criteria of a teacher education program without
destroying the integrity and value of its original design. The answer lies in the data itself, by taking into account what has worked and what has not and then restructuring the project’s design to take on board these implications.

The previous chapter reported that the KBC Project is a viable model of teacher education, however, it can be modified. The faults of the project have, however, generated an understanding of what is needed in any reconceptualising of the original design. Any modifications to be made to the structure of the KBC Project need to accommodate the community triad’s (students, KBC facilitators, school-based teachers) needs to maintain the necessary social structure.

At the conclusion of Session One 2000 the KBC could stand as an alternative mode for teacher preparation at the UOW. The students were seen to benefit from learning in a supportive and collegial environment. The learning source of PBL proved problematic to implement in the operating constraints of the university and the participating schools. Although dogged by operating difficulties it was possible to form a hybrid version of PBL in teacher education. An analysis of the actions and learning undertaken by the students showed that because they were divided into four school groups they first demonstrated knowledge building traits separately, and then as time went by and confidence as learners grew, as a collective group.

The KBC students showed in 1999 that they relished the opportunity to discuss and voice their opinions. Being a part of the KBC had provided them with personal feedback, friendship and support networks where they knew their
opinions mattered. The students stated that they felt valued as persons in this learning environment.

The KBC students identified that what they required, as a learner was a link between the theoretical and the practical components. However they still needed processes in place that would enable them to take a much greater control of their own learning. The PBL problems were difficult and the students became focused on solving just the problem often at the expense of all the incidental learning that was on offer in the classroom and the schools.

The majority of faculties that operate PBL provide their students with hypothetical problems that although based on 'real-life' scenarios do not have to be solved in the real setting. It was the expectation that the KBC students would use the setting of the classroom to work through their PBL tasks. The constructed PBL problems were based on everyday scenarios of a school or classroom but the students often found that the problem could not be solved in the context where they were situated. Thus the students would force-fit their research to fit their learning.

Together with the design of the problem tasks another barrier to the successful implementation of PBL has been the context of the university itself. As part of the rules and constraints imposed upon the KBC by the university the students were compelled to enrol in certain compulsory subjects for which they had to obtain a grade. Attempts to date to provide students with a ranking of either 'pass' or 'fail' have been denied. Therefore the assessments task must carry a percentage ranking and this conflicts with the idealism of PBL. The research undertaken in 1999 and
Chapter Nine: Implications and Recommendations

2000 showed that the attempt to combine PBL as defined with traditional subject delivery was a bittersweet mixture of success and failure. For the KBC 2 2000 students PBL did not occur at all due to the constraints of the compulsory subjects.

While working in groups had provided the students with opportunities to experience and develop team and research skills, the experience of PBL over the last two years has predominantly provided insights into the pitfalls of trying to implement what might be called a "pure" PBL model. Yet the students who have been part of the KBC, despite the constraints, developed a deep sense and understanding of schools, classroom work, and the multiple roles of a teacher.

Any redesigned model needs to capture and maintain the significance of the community triad’s influence as well as allowing the students in a KBC to develop their own learning and assessment tasks. Because the problems that were written did not suit the individual school sites here, KBC students need to develop assessment tasks that are specific to each school context. This new model would support the students and would help them make connections between theory and practice without the distraction of the contrived PBL problems used in the 1999 and 2000 KBC Projects.

In any new or reworked KBC model consideration must be given to how best to incorporate the compulsory subjects that first and second year students must enrol in at the UOW. The model must have enough scope to allow participating students to negotiate in their specific contexts (i.e. the school sites) and still meet the
required outcomes of the subjects. To continue encouraging life-long learning the revised KBC model should allow students to practice more completely the principles of PBL and constructivism.

The KBC Project needs to provide for the ongoing participation of the community triad, as well as the KBC ideals of responsibility for learning, problem solving and reflection. The three original learning sources could be reconceptualized to encompass the four domains of teacher "know-how". The following section discusses this recommendation.

**The Four Pillars of the KBC Project**

In a redesigned KBC model it is recommended that the three original learning sources could become the four pillars of teacher "know how". These four pillars would underpin KBC student learning. The recommended four pillars are:

1. Community collaboration.
2. Taking responsibility for own learning.
3. Identifying and resolving professional problems using the principles of PBL.
4. Becoming a Reflective Practitioner.

Three of the four pillars for teacher know-how reflect the original three sources of learning. The fourth pillar, "Becoming a Reflective Practitioner", has been added as a learning source because in the 1999-2000 KBC Project implementation of reflection was emphasised and encouraged by all facilitating staff. Dewey (1933)
stated that 'reflective action' helps teachers examine the moral, ethical, political and instrumental issues that are embedded in everyday practice.

These four pillars will act as support structures for the KBC students. They are also the qualities that were identified in Ramsey (2000) as the desired traits for teachers to possess in the 21st Century. When interactions among the four pillars are operating effectively they can influence effective approaches to learning.

The connecting arrows illustrate how each of the four pillars is interrelated and interdependent. It is timely to discuss the role of each of the four pillars in detail.
Chapter Nine: Implications and Recommendations

1. **Community Collaboration**

Pillar number one expects the students to:

- demonstrate understanding of the value and power of collaborative learning;
- demonstrate ability to work productively and professionally as a member of a team;
- demonstrate the ability to deal with inter-group conflict in productive ways;
- understand how “group dynamics” work and be able to apply principles and “know-how” to maintain group cohesion;
- demonstrate that they can collaborate in the generation of professional knowledge which all who are members of the KBC community can share and use;
- understand the difference between “competitive” and “collaborative” learning and know when either is appropriate;
- actively support each other’s and the whole community’s learning; and
- be honest, “up-front” and professional with each other, especially with respect to opinions and behaviour of others in the community.

2. **Taking responsibility for own learning**

Within pillar number two it is expected that the students will:

- demonstrate that they understand the importance of becoming autonomous, self-directed, independent learners;
- demonstrate that they know how to make effective, productive, learning decisions;
• identify a set of learning “strategies” and/or “tactics” that responsible, self-directed, independent learners can use and/or draw on; and

• apply some of these strategies and/tactics to their own learning.

3. **Identifying and resolving professional problems (using the principles of PBL)**

Pillar number three embodies the principles of PBL. This is a major difference in the recommended model. The previous KBC models of 1999 and 2000 both had overarching problems based on PBL that had been written in an attempt to meet the requirements of the compulsory subjects. These problems proved cumbersome and in the end served only to hinder the learning of the students. Although the problems were written to meet specific curricular objectives and were anchored to current school issues they had not been tested. In fact, these problems were trying to cover too many curriculum objectives. After the initial enthusiasm of the students had waned the problems no longer motivated the students. Instead they had the opposite effect, the students becoming increasingly frustrated trying to force-fit them into their various school settings. Yet the experience of negotiating and working in collaborative teams utilising research skills was a valuable component of the KBC Project. Therefore pillar three provides students the opportunities to practice the principles of PBL without the overarching problem.

Pillar three expects that the students will:

• demonstrate the ability to identify and articulate professional problems, which need to be addressed and resolved;

• demonstrate the ability to analyse the key elements in a range of professional problems;
• make explicit and apply a set of problem-solving strategies and tactics which can be used to address and resolve such problems;

• demonstrate the ability to identify resources that might be needed to address and resolve a problem, and subsequently find and use such resources; and

• demonstrate the knowledge and ability to use time effectively in the problem-solving process.

4. *Becoming a reflective practitioner*

The fourth and final pillar of KBC learning engages the students in reflective practice. In doing so, it is suggested, the KBC students will:

• demonstrate the ability to engage in the process(es) inherent in reflective learning and teaching; and

• be expected to make regular, honest, and systematic judgements of the degree to which they believe they have demonstrated the four broad specific outcomes of KBC in the various settings.

Further support for the installation of the four pillars of learning for KBC students can be found in the most recent report into teacher education that argues that these four pillars are central to the development of effective professionals (Ramsey, 2000).
Suggestions for Further Research

Just as the original model underwent intense scrutiny for its impact on the students’ experiences when it was implemented, so too should the proposed new model in 2001. Feedback would need to be sought from KBC students, facilitators and school-based staff alike. It is proposed that one way to carry out such an evaluation would be to have students reflect upon their progress in relation to the Four Pillars at regular intervals throughout the KBC session. One way to implement this would be to introduce the use of student self-evaluation reports.

KBC students would be expected to make regular, honest, and systematic judgements of the degree to which they believed they had demonstrated attainment of the Four Pillars or outcomes of KBC learning in the various settings, i.e. the school, KBC home-room, and during Self-Directed Learning. In conjunction with the students carrying out self-evaluations, the facilitators, and mentors, would also make judgements as to the degree to which they had observed students demonstrating behaviours that indicated achievement of the Four Pillars or outcomes. On three occasions during the session students would compare their judgements with those made by the facilitating lecturers and or mentor teachers. Any discrepancies would then be discussed, clarified and where necessary, corrected.

Apart from the need to monitor the students and the Four Pillars of KBC the new model sees the removal of the contrived problem that was synonymous with PBL. The removal of the set PBL problem is a radical shift from the PBL literature
(Boud, 1985; Margetson, 1994; Duch, 1995; White, 1996). As this approach is untried in teacher education and is a major shift from the original model it clearly requires further research. As the students will be applying the principles of PBL and negotiating assessment tasks based on their particular learning contexts the scope for further research in this area alone is significant. Questions such as, “were the students able to negotiate and construct their own assessment tasks?” and, “were the students able to work within the guidelines of PBL?” would need to be addressed.

Is the KBC Scalable?

As an alternative model for teacher education the KBC Project with the modifications suggested, can stand alongside both past and proposed teacher education models. However, in view of current student enrolment numbers whether it can be upsized is a question that remains unanswered.

Despite the success of the KBC at the time of writing, it is unknown how long the Faculty of Education at the UOW is likely to support a program that only caters for a limited number of students. Although it is possible that several cohorts of students could be working simultaneously with facilitators and mentor teachers this has been untried and there are several obstacles and constraints that may see this option not gaining momentum. These constraints would include the reduction of student numbers attending mainstream lectures and tutorials, therefore some lecturers may see this as an erosion of their niche or speciality subject.
Becoming a KBC facilitator is a cultural shift. As a KBC facilitator the lecturer is no longer simply the disseminator of facts but is seen by the students as a co-learner. This aspect may not be acceptable for some who prefer delivering the lecture-tutorial format. Being a member of a learning community means that all are involved in the daily undertakings of learning and researching. Students have a greater access to their KBC facilitator than students do in the mainstream program and this may also not appeal to all. The decision to upsize would need to have the full cooperation and support of the faculty. All current lecturers would need to believe in the underpinning philosophy of the KBC to maintain the program’s integrity.

There have been suggestions at the UOW “to take the best bits of KBC” and apply it to the mainstream program. This option could destroy the integrity and uniqueness of the KBC Project. The community triad is the basis of the success of a KBC in teacher education and it is this aspect from which all else flows. Without the trust that is developed in the initial phase of the session the knowledge that is built and shared will not eventuate. Therefore, for the long term survival of the KBC Project, whether it be one or more cohorts of students there has to be a full faculty commitment and understanding of how a KBC operates. At the UOW this is not yet present. Ironically some of the major opposition or difficulties imposed upon the KBC Project came from within the Faculty of Education. It cannot be denied that without the support of the Dean and Executive Staff in the faculty the KBC Project would never have got off the ground. However a general lack of understanding about KBC ideals and needs has often meant that its very survival was fraught with difficulties. Although mainstream
staff were invited to lunchtime seminars and student presentations they were generally poorly attended over the two years under consideration. While ever there is a lack of general understanding about how the KBC operates there will be resistance to change as was evident in the obstacles that the KBC 2 students needed to overcome in Session One 2000.

In order to upsize the current student enrolment along with appropriate extra staff the need for more physical space in the way of homerooms would be seen as essential. However, with creative leadership and innovative timetabling there is an alternative to acquiring extra homerooms. The answer lies in refashioning the current timetable. The traditional timetable in the undergraduate degree has seen most classes finished by four in the afternoon. If extra cohorts were admitted the extension of the day or even the week with the scheduling of Saturday classes could see a more effective and efficient use of facilities.

The Monitoring of KBC Graduates

One of the primary purposes for the establishment of an alternative model of teacher education was the well documented difficulty beginning teachers were having when they commenced in schools (Veenman, 1984). It would therefore be significant to follow several KBC graduates as they started in their appointed schools in 2002. This follow-up study would seek to determine if in fact the KBC students were able to make the transition to schools more easily than other beginning teachers. Any tracking studies of KBC students would need to pay particular attention to how the principles of either the Three Sources of Learning
(1999 and 2000 KBC models) or the Four Pillars of KBC Learning (proposed 2001 KBC model) impacted on the beginning teacher's own class planning and teaching. The KBC graduates, as beginning teachers, would consequently be observed and interviewed as to how they were or were not being responsible for their on-going learning, problem solving, collegiality and reflection.

**Reflection on the Research Process**

Hindsight is a valuable tool and reflection on this research journey has shown that there are aspects and elements that, given one's time over again, some actions may have been treated differently. The opportunity to become part of the facilitating team was an opportunity too great to pass, but it came at a cost. The time required being a KBC facilitator meant that less time was available for the research process itself. The luxury of sitting at the back of the room, accompanying school groups or watching a group work through the problem solving process was no longer available. Whereas in 1999 being the “fly on the wall” filled many hours or, as Fran described me in 1999, “as part of the furniture” in 2000 this option could no longer be sustained.

At first it appeared as though the data that the students were prepared to share were drying up and it took several weeks for the trust that students and researcher once shared to be rebuilt. The ability of both parties to wear ‘two hats’ was required and although it was never quite the way it had been in 1999 the pioneer KBC students wanted their story told. This desire saw the e-mail messages start to
once again flow in 2000 and the students ask whether or not I had batteries in my
tape-recorder. It was a gamble that paid off but other researchers should choose
this option with caution.

There were many stakeholders involved in the 1999-2000 KBC Project: the
students and the KBC facilitators, the DET, the school-based teachers, the Faculty
of Education at the UOW, and the NSW Teachers' Federation. This research
project has only been able to focus on the experiences of the pioneer students. Due
to the given timeframe for this study it has not been able to focus on the
experiences of these other stakeholders. At the time of writing there are plans being
put in place for a joint research study by UOW and the DET. The purpose of this
study will be to describe and evaluate the nature of the relationship(s) between the
KBC Project and the professional awareness, growth, and development of the
teachers at the schools which participated in the program. In order to develop a
complete perspective on all aspects of the KBC Project all the major stakeholders
will need to be involved in research such as the above.
References


References


References


Cambourne, B. L. (1998b). *Problem-based learning as an alternative mode of delivery in initial teacher education*. Unpublished Draft Agreement between the NSW Department of Education and Training, the NSW Teachers Federation and the Faculty of Education at the University of Wollongong. University of Wollongong: Australia.


Accessed: 03/09/02


References


Appendices

Appendix One: Personal Presuppositions

In order to identify and make explicit any biases and prejudices held by this researcher, before the research for the KBC project began I answered a series of questions in an honest and open manner.

What do you think your study will eventually show? Why?

I believe that my study will show that participation in the KBC produces students who have forged a strong link or understanding between teaching and learning. As well as an understanding about the relationship between what they do at university and how it is relevant to what they do in schools. This relationship will become evident to the students because of the role of SBL and PBL, because the students are given problems to solve during their in-school time the relationship or the linking of theory and practice must be made more evident.

The experience of working in a community that encourages collaboration will instill into students the need for sharing of ideas and the fact that teaching is a career that requires support from peers.

PBL encourages students to learn to learn, to take charge of their own learning and this facet is necessary for life-long learning which is another aspect that students will become aware of because of their close association in the community of learners i.e. their peers, school-based teachers and facilitators. Participation in a community is also an aspect that students need to be alerted to. Schools are more than just a conglomeration of people. They are places that have a culture that is unique and one that needs to be understood. If preservice teachers can grasp an awareness of this then they have a chance to graduate and begin work without
facing 'reality shock'. I think that the nature of the project will show that the students who participate in the KBC have an understanding of these issues.

*What do you hope your study will eventually show? Why?*

It is my hope that the study will show that the students benefited from learning in a collaborative environment. I hope that the combination of the three learning sources is effective in assisting students to understand the link between theory and practice. I hope that the study will show that the students were willing to take the responsibility for their learning.

I am hoping that the study will show these attributes because without the students willing to take on responsibility for their learning and being active participants in the learning process then the KBC to the outside observer will look no different than the mainstream program. The students will need to be able to address their own perceived inadequacies and gaps in their knowledge. I am hoping that the study will show that the students were able to either work together to address these gaps or show an initiative as to how to seek the answers they require. If students are simply asking the facilitator/s for the answers they need then they will not be demonstrating the traits of a problem-based learner.

*How do you think that teacher education should be taught at university? Why?*

I believe that teacher education should have a strong link between theory and practice. It should be evident to students that what they are doing at university has a place in the classroom. Students pay a lot of money to attend university; they should be receiving a training that has relevance. There is no point in spending three years at University, simply to regard it as a hoop that must be jumped through so that they can get a teaching job and then start to learn how to teach. Universities must be playing an active and valuable role in the preparation of teachers.

The transmission of knowledge to a large group of people is not easy. If it must be done via a mass lecture then the lecture must be linked in a cohesive manner to
any following tutorial/s. Lectures and tutorials conducted in teacher education must contain hands-on components, with strong and explicit references as to how the content can be applied into the primary classroom. Theory is very important; it plays a vital link but students must be able to see or be given the opportunity of discovering the link with the primary classroom. Students must see the relevance of why they are at University doing a teaching degree.

What do you think is wrong with the mainstream mode of delivery? Why?

At present the mainstream mode consists of mass lectures and tutorials which often do not correspond. The mass lecture does not cater for any individual style of learning preference. It is assumed that because the students are taking down a series of lecture notes either from an overhead projector or from what the lecturer is saying that learning is taking place. Mass lectures do not allow for any active participation by the student. Students move from one subject to another in the course of a day and rarely do the lecturers make mention of any other subject other than their own. This fragmented delivery of subjects results in the students not seeing how they all contribute to the ‘big picture’ which is of course the whole degree and life in the classroom at the conclusion of their studies.

Quite often the students view the compulsory subjects as a waste of their time and state that they only really learn when they are on practicum. This belief must be arrested. The University component of their degree must be seen as having a relevant place and worthwhile aspect. This is yet another reason why any attempt to provide an alternative to the mainstream must be initiated. If students value the time in the schools then there is a strong and urgent need to link these institutions. This way students may place a value to their whole course not just a select few weeks of each year.

From the outset of the research that was conducted into the KBC these were the presuppositions held by this researcher. Once they were identified it made the process of collecting data that conflicted or detracted from these presuppositions clearer. Kaplan (1964) states that explanations are always condition and context
dependent, partial, inconclusive, and indeterminately applicable therefore having one's presuppositions made explicit allows the reader to understand the context from where the research has originated.
Appendix Two: Research Journal Extract

The following is an extract from the research journal. To reiterate, the research journal was the place where field notes and observations were recorded; it played a vital and integral role in the data collection phase. The scene for the following extract needs to be explained; it is a recording of the events leading up to one school group finally reaching a decision as to how to carry out their first PBL task. This group had been struggling to make a decision for three weeks. They kept verbalising what they had to do but because they did not have any group/team skills they kept floundering and losing their way. When they would reach a plan they were not able to stick to it. Each group member was trying to answer someone else’s part or tell the other person how to answer or attempt to answer her section. The following is the captured record from the research journal about the day the group made a decision.

The group FINALLY reached a cohesive plan by 2.30pm today. I thought that they would never get there.

At lunchtime there was so much tension in the group they could almost be described as dysfunctional. I thought and expected that there was going to be a very vocal and loud breakdown with group members storming out. JH was crying, CP was a mass of stress and just wanted time on her own, she was complaining of a headache as a result of the tension. HR who had a fairly clear idea of what to do but was being totally disregarded possibly even dismissed it was though anything she had to say was counted as irrelevant. KO was being dominant but not really producing any results, FS just wanted direction, and KF was cool and calm seemingly sitting back and waiting for the maturer members of the group to take charge.
After they spent lunch apart the group reformed and it was KF who took charge. She started by doodling on the whiteboard and then drawing a folder, her drawings seemed to capture the attention of the other group members. The drawings sparked a brainstorming session, which then developed into writing and planning. The group then structured a cohesive plan.

6/5/99
Appendix Three: PBL Task 1 EDUL 101 Language 1 Problem

Scenario

It’s the first Tuesday of the second term of the school year. This is the day you’ve been looking forward to. For the last six weeks you’ve been learning a whole new set of skills such as how to identify problems and go about solving them, how to use the collective intelligence and experience of the group to solve problems, how to take responsibility for your own learning in ways you were never expected to at secondary school, and a whole lot more. Two weeks ago the final decisions about who would be attached to each school had been made. You had been put in a group with four others and allocated to Flatrock Primary. About ten days ago the five of you plus one of your university lecturers had visited the school spent an hour or so there and met some of the staff. They seemed to be just as keen as you were to get started, and made you feel very welcome. At last the “in-school” part of your course had arrived. You were both excited and apprehensive. What would you learn? Would you enjoy it? Would you survive?

The bell signalling the beginning of “playtime” rings and the teachers who are not on playground duty begin arriving at the staff room for their morning tea. You and your four colleagues had been told to wait in the staff room and join in the informal conversations as a way of “getting to know” the teachers with whom you’d be very closely associated over the next ten weeks. As the teachers begin to arrive, you wonder what the next ten weeks will bring. You turn to your friend Belinda and whisper, “Here they come. I’m as nervous as a kitten. How about you? Belinda sighs nervously and responds, “Me too. I’m starting to wonder whether I really want to be a teacher after all”.

“Did anyone watch 60 minutes last night?” asked Mrs Goodman, one of the teachers who had been selected to act as a Mentor for you and the other “teacher-associates”. She sipped her tea and waited for a response. It wasn’t long in coming.
"Yes. It was another blatant case of teacher bashing. This time they're claiming that literacy standards have fallen dramatically over the last twenty years, and it's all because teachers are lazy bludgers who don't know anything about how to teach reading. They said things like, "Today's teachers don't haven't kept up with modern theories of teaching reading, they use outmoded and ineffective teaching materials and strategies, and modern day teaching methods don't teach kids phonics that's why they can't spell or write."

It was Mr Nash the Kindergarten teacher. He dunked his biscuit into his tea angrily and continued talking, "I saw it too. I was disgusted with the misinformation they were spreading. I think we need to do something about this."

BREAK HERE

**Part II of the problem:**

Mr Blacker, the deputy principal who was introduced to you on the first visit to the school as "the Coordinating Teacher" during your ten weeks stay, suddenly spoke up. He looked over to you, Belinda and the other three teacher associates, gave a friendly smile and began to talk in a quiet yet strong voice. "Aren't you guys doing Language 1 this session"? You nod in agreement. "Has anyone got a copy of the course outcomes? You know the things the course says you will understand and get control over"?

Jenny, who is always well organised, has hers with her and hands it across.

He reads through them, mumbling to himself as he reads. "I wonder how many of these relate to what really happens in today's schools? I wonder how many of them we can come to understand and apply?"
The List of Outcomes Constructed by the Lecturers who Designed EDUL 101 which Jenny gave to Mr Blacker

Introductory Statement

Here is the BROAD list of outcomes which students are expected to achieve IN VARYING DEGREES in EDUL 101 (“Language 1”). Each student should be aware that Language 1 and Language 2 are essentially based on the same set of outcomes. In Language 1 these outcomes are introduced in the context of early childhood (Years K-3). In Language 2 the same outcomes are revisited, in more detail, in the context of upper primary (Years 4-6).

READING

Knowledge

Students enrolled in EDUL101 will acquire knowledge about the following topics and concepts:

• what is reading?;
• the place of reading in today’s culture;
• the aspects of language which are implicated in reading;
• a range of assessment strategies;
• how readers differ e.g. ESL, Aboriginal students;
• developmental patterns of readers (emergent, beginning, fluent);
• what readers do i.e. how they use the sources of language information, the roles they take as they read code breaker, text participant, text use, text analyst;
• what readers read and how different texts orchestrate what readers do as readers;
• how reading is best learned;
• the connections between reading writing talking and listening;
• the links between theories and /or models of reading and classroom practices; and
• a range of classroom practices.
Skills
Students enrolled in EDUL101 will acquire the following skills in reading instruction. They will be able to:
• reflect on their own roles and processes as readers;
• assess and identify students’ understandings and skills in reading;
• interact, question and respond around texts in ways that enhance student learning;
• select appropriate texts to read to and with students;
• select appropriate reading tasks for the diverse range of student needs in their care;
• plan and evaluate reading programs which reflect student needs;
• match readers with appropriate strategies and texts;
• implement suitable instructional strategies and;
• talk with students about skills and processes involved in reading texts.

Values.
Students enrolled in EDUL101 will develop the following attitudes:
• value reading and its role in learning in today’s culture; and
• enjoy and value children’s texts.

WRITING
Knowledge
Students enrolled in EDUL101 will acquire knowledge about the following topics and concepts:
• what “writing” is;
• the place of writing in today’s culture;
• the aspects of language which are implicated in writing;
• the processes writers need to use;
• a range of assessment strategies;
• how writers differ e.g. ESL, Aboriginal students;
• developmental patterns of writers (emergent, beginning, fluent);
• what writers do- ie how they use the sources of language information, the roles they take as they write- code breaker, text participant, text use, text analyst;
• the connection between audience of a written text, purpose of written text, linguistic choice made in the structuring of a text;
• how writing is best learned;
• the connections between writing reading talking and listening;
• the links between theories and/or models of writing and classroom practices; and
• a range of classroom practices.

Skills
Students enrolled in EDUL 101 will have the following skills in writing instruction. They will be able to:
• reflect on their own roles and processes as writers;
• assess and identify students’ understandings and skills in writing;
• interact, question and respond around texts in ways that enhance student learning;
• select appropriate audiences and purposes for students’ writing;
• select appropriate writing tasks for the diverse range of student needs in their care;
• plan and evaluate writing programs which reflect student needs;
• match writers with appropriate strategies and texts;
• implement suitable instructional strategies; and
• talk with students about skills and processes involved in writing texts.

Values.
Students enrolled in EDUL 101 will develop the following attitudes:
• value writing and its role in learning in today’s culture; and
• enjoy and value children’s texts.
Objectives of the EDUL 101 Problem Cycle

There are 3 broad categories of objective associated with this problem cycle:

Category 1. (PBL related objectives)
Students will use the skills and knowledge developed in the Preparation Course to:
• interview teachers and children in ethically appropriate ways;
• observe teachers teaching and students learning, take field notes, and when necessary analyse these field notes;
• seek permission to peruse and make copies of any teacher-made documents which might be appropriate for the problems which are being addressed;
• seek permission to identify and copy any children’s products which might be relevant and appropriate for addressing the problems;
• apply the PBL skills, knowledge, understandings and group processes to this cycle of PBL; and
• draw on the range of resources available at schools and university to address the problems, eg readings, texts books, Library, CRC, videos, Web pages, each other, the five lecturers involved in the KBC group, and any other valid and ethical resource.

Category 2. (EDUL101 related objectives)
Students will draw predominantly on the skills, knowledge, and understandings, which are associated with the EDUL 101 in this problem cycle

Category 3. (EDUF & EDUT related objectives)
Students will integrate, wherever possible and appropriate, the knowledge, skills understandings which are part of EDUT 111 (Curriculum & Pedagogy) and EDUF 111 (Growth & Development).
2. **What to assess:**
   - The degree to which the students demonstrate they have acquired control over, knowledge about, and understanding of the EDUL broad set of objectives described in the problem scenario;
   - The degree to which the students demonstrate evidence of being effective "teacher-associates"; and
   - The degree to which the students show a developing understanding and appreciation of the culture of schools and classrooms, and the way schools "work".

3. **How to assess:**
   - There will be three items of assessment to be handed in at the completion of this problem cycle, two which will be ‘Individual’ (30% & 40%) and one which will be a group effort (worth 30%).

4. **Specific Items of Assessment**

   **Item #1: Individual: Personal Piece of Writing For Publication 30%**
   A personal piece of writing which forces students to:
   - reflect on their personal experiences related to the teaching of reading during their experiences as a “teaching-associate”;
   - experience the writing process from blank page through to finished “published” project and reflect on it; and
   - make links between these personal experiences and at least 6 of the set readings.

   **Details of Personal Piece:**

   **Length:**
   1500-2000 words

   **Purposes & Audiences of the Piece:**
   The 22 personal pieces will be put together in a special publication by an imaginary company called “KBC-Press Publishing Company. The title of this collection will be along the lines of “Reflections of 22 Novice Teachers of Literacy”. The “flavour” of the book will be along the lines of the “The Story of A
Significant Event in My Life” piece the students began to work on in the last week of class.

The main audience will be other novice teachers of reading (student peers in the mainstream group), the teachers at the schools they’re associated with, Faculty staff, and anyone else who wants an entertaining yet informative, academically respectable and interesting “read” about what it’s like to be a novice teacher trying to learn about teaching reading and writing in today’s schools and link it to what’s in the prescribed literature.

To provide a forum for students to comment on what they learned about the writing process as a consequence of writing a piece for publication, (i.e. the process of going from blank page to finished product).

Criteria for assessment:

Evidence of careful observation/ discussion of and with teachers. use of field notes/ interviews, conceptual connections to at least 6 of the prescribed readings, conventions of academic writing and presentation. (10%)

Ability to tell a ‘good yarn’ which will fulfil the major purposes of the intended audiences. (10%)

An extra one page summary of what the experience of working on this personal piece from blank page to finished publishable product taught you about the writing process and the teaching of writing. (10%)

Item #2: Individual: Portfolio 40%

Students will create and present a portfolio of evidence, which will demonstrate to their assessor (BC), the degree to which they have acquired each of the EDUL 101 outcomes listed above.

This portfolio will have 3 parts.

1) Summary / overview of the “research” you carried out to collect their evidence (samples of interviews, with whom and when, ditto observations with
field notes samples etc.) 1-3 pages is plenty. Conventions of academic writing to be met.
This part is worth 10%.

2) A file of "evidence", organised any way you wish, with an explanatory account which helps the assessor understand how the evidence which is presented demonstrates the degree of control each student believes he/she has achieved over certain outcomes.
This part is worth 20%.

3) A list of those outcomes students don’t think they’ve yet got control over, or need to work on a bit more, and some plans for dealing with these deficits.
This part is worth 10%.

Criteria for Assessment:

Evidence of ability to identify which of the outcomes of EDUL101 subject can be achieved at each school in the everyday ebb and flow of school life. (Students are NOT expected to achieve EVERY OUTCOME. Rather they are expected to be observant enough to identify how the school culture they are in can be used to identify which outcomes can be acquired, and the degree to which they have acquired them.)

- The authenticity of the items of evidence which are included in the portfolio;
- The way the portfolio is organised for ease of reading and evaluation; and
- The ability to identify the outcomes still to be acquired and the credibility/feasibility of the plans presented for eventually acquiring them.
(This part between 1-3 pages with all conventions of academic writing met.)
Appendices

Item #3 Group: Resources for teaching literacy (30 %)

A set of teaching ideas, strategies, activities, “tips”, and other resources that will support the teaching of literacy in lower grades. These resources to be set out as ‘one-to-two-pages’ which busy students and busy teachers would find easily accessible and useful.

Criteria for Assessment

• Range and usefulness of resources;
• Clarity of explanation of how each resource can be used;
• Clarity of explanation of why each activity/resource is included; and
• Conventions of academic writing fully observed.

(Plan is to make copies of each group’s set for everyone as a resource for all.)

Resources:

The major resources for this problem are sources of information which students should draw on. They fall into 7 categories namely:

1) Teacher Interview/discussion.
2) Observation/field notes in Classrooms.
3) Child Interview/observation.
4) Workshops/discussions scheduled back at University.
5) Prescribed readings, related books, articles, web-page.
6) Copies of teacher records, programs, planning documents.
7) Copies of children’s work samples.
Appendix Four: PBL Task 2: Children Learning, Teachers Teaching

Scenario

You are a teacher in your first year of teaching at a local primary school. The principal has recently become interested in Multiple Intelligences Theory and talked to a recent staff meeting about the concept. You remember the theory from your university days and so the principal has asked you to join a committee that will lead the school’s movement to this approach. She has provided the members of your committee with release time so that you can observe children and how they solve problems or undertake tasks across the eight intelligences. You will have the opportunity to observe children in other classes as well as to reflect on your own teaching. As a committee, you have lots of questions that you want to explore as part of your observations. Some of these include the following: When children are working on their regular classroom tasks, which intelligences are being used and in what ways? What are the indicators of children’s learning in each of the intelligences? How are all the intelligences being developed?

END PART ONE

As the committee discusses its observations, you find yourselves contemplating questions about your own roles as teachers. If you want to encourage the development of all children’s potential, in what ways will you present new concepts to them? As a beginning teacher, you realise that you need to present lessons in different ways to cater for different students’ learning needs. You have always thought that a variety of lessons was enough stimulus for the students but you question now whether certain types of lessons are more appropriate for teaching and learning in different intelligences. Your committee uses its research into the literature and its observations and reflections on children’s learning to explore further questions such as the following: What are your options in terms of the different types of lessons you might present? How do these link with children’s learning in the different intelligences?
Assessment for Problem #2

Individual:

1. Plan three lessons that will cater for all the intelligences. Note that not every lesson will incorporate all eight intelligences but over the three lessons you should cover all of them.

2. Conduct a case study of one child. Use your observations of the child and artefacts of her/his work to draw a profile of the child’s intelligences (see Appendix 1 for some materials that may help you in this task). Is there any evidence of other intelligences? Make sure that you keep the child’s identity confidential by using a pseudonym.

Group:

1. Prepare a report for a staff meeting to present your findings as a committee. You will need to indicate a range of activities that the school will undertake in order to adopt an MI approach.

Some of the questions you might cover in your report include the following:
What are the indicators of children’s abilities in each of the intelligences?
According to the literature, what are the different types of lessons that can be presented by teachers?
How do the types of lessons undertaken by you as teachers link with the eight intelligences?
Are there any intelligences that are not being fully developed? How could this be addressed?

Marks will be distributed as follows:

- Individual Assignment #1 30%
- Individual Assignment #2 30%
- Group Assignment 40%
Suggested Resources for PBL task 2

Books:

Other:
EDUF111 *Handbook for Child Development*. All students can get this from WV.
"*Child Development in Action*" -- Video available for EDUF111 from CRC.
Appendix Five: The Data Trail

The following table is a breakdown of which data were collected during the relevant period:

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<th>Weeks 5-8</th>
<th>Weeks 9-12</th>
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| Lecture theatre observations |              | 4           | 4           | 4           |</p>
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